REPORT

ON THE

SANITARY CONDITION

OF THE

MUNICIPAL BOROUGH

OF

BIRKENHEAD,

FOR THE YEAR 1878.

BY

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DURING 1878.

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Report of the Medical Officer of Health to the Health Committee.

A Charter of Incorporation was granted to Birkenhead in 1877. The Charter bears date August 13th

The Municipal Borough thus incorporated is co-terminous with the Parliamentary Borough of Birkenhead, and includes Birkenhead and Claughton-cum-Grange, Tranmere, Oxton, and a portion of Higher Bebington.

At the official inquiry, by order of the Privy Council, held at Birkenhead on January 31st, 1877, and following days, evidence was given as to the extent, rateable value and population of Birkenhead and the out-townships now incorporated; and annexed is a copy of the proof submitted in this respect.

Townships.	Area in Acres.	Rateable Value as per last Overseers' Assessment	Estimated Population on Dec. 31, 1876.
		£	
Birkenhead	1279¾	205,327	52,302
Claughton-cum-Grange	438¾	25,647	2,733
Tranmere	1071¼	65,471	19,517
Oxton	814	24,270	3,500
Higher Bebington (part of)	245¾	18,000	3,000
Birkenhead Borough	3849½	338,715	81,052

The area may be considered as absolutely correct, being based upon the ordnance survey recently made in the district. The rateable value as set down may be taken at about 10 per cent. less

than the gross value, and it is inserted here in a column parallel with the area and population, as together with them indicating the relative importance of the several townships. In respect of the population, all that need be said is that it was the best estimate that could be made at the time. No enumeration of the local population has been made since the taking of the imperial census on April 3rd, 1871, and as it was generally conceded that the rate of increase maintained during the decade 1861-71, has, of late years, been considerably augmented, it became necessary to have recourse to some direct method of computing the number of inhabitants in the various townships. In respect of Birkenhead an estimate was readily effected as it was believed that the proportion of individuals to an inhabited house has not appreciably altered since the taking of the census. Thus the number of habitable houses in Birkenhead at the close of 1876 was ascertained, and from this was subtracted the number of empty dwellings, as returned by the police, together with a trifling percentage as error allowance, which yielded the number of inhabited houses—7,818. This multiplied by 6·69 (the average household in Birkenhead at the date of the census) gave a population of 52,302. The population of Tranmere appears to have been computed in the same manner, the proportion of individuals to a house in that township being 5·94. As regards Claughton and Oxton, it was known that nearly all the houses built in this portion of the borough, since the census, were large well-appointed dwelling-houses, and it was judged that the average household of 1871 would not represent the average household of 1876, so in calculating the population the average household was considered as augmented. In Oxton not only have all the houses, without exception, erected since the census been residences of a superior order, but towards the end of 1871 eighty small dilapidated cottages were pulled down, so that the average household which at the census was 5·37 was computed at 7. We are not able to state what method was adopted in forming an estimate of the population of the portion of Higher Bebington incorporated. The population of the whole township was at the last census 3,172, and at the official inquiry in January, 1877, the counsel representing Higher Bebington said the population was estimated at 4,000, of which 3,000 were within the parliamentary borough.

Having thus drawn from the proof submitted at the official inquiry which preceded incorporation an estimate of the population of the various component parts of the Borough on December 31st, 1876, it remains for us to calculate what increase has taken place in the local population between this date and midsummer, 1878. It might be assumed that the readiest way of reckoning this increase would be to take the number of dwelling-houses completed during the eighteen months in each township, and multiply it by the figures representing the average household. This, however, would probably show an increase in excess of what has actually taken place, as the immediate effect of incorporation, which has doubtless assisted in extending building operations of all kinds, has been in an especial manner manifest in the impetus given to the trade engaged in the production of small cottage property. It is proposed, therefore, to estimate the increase of population simply at two per cent. per annum, during the eighteen months referred to, which is not greatly in excess of the natural increase. The population of the several townships forming the borough and of the whole borough is therefore estimated to have been, at the middle of the year 1878, as under :—

Birkenhead	53,871
Claughton	2,815
Tranmere	20,102
Oxton	3,605
Higher Bebington	3,090
Birkenhead Borough	83,483

Of course any estimate of population made seven or eight years after an enumeration is an unsatisfactory basis on which to calculate mortality statistics, but it is believed that the estimate now produced is nearly correct, especially as regards the larger townships—Birkenhead and Tranmere—and that its adoption will not lead to any grave mis-statement of facts.

During the year 1878 the returns of the Local Registrars record 2,932 births and 1,656 deaths in the municipal borough of Birkenhead. The natural increase to the population for the year was, therefore, 1,276.

Of the births 1,499 were males and 1,433 were females ; of the deaths 827 were males and 829 were females.

Further particulars of the births and deaths, that is to say the numbers returned in each quarter of the year, and the number referred to each township, are given in the following tables. The births and deaths in the Union Hospital or Workhouse it will be seen are entered separately.

Births.	1st Qr.		2nd Qr.		3rd. Qr.		4th Qr.		1878	
	M	F.	M.	F.	M.	F.	M.	F.	M.	F.
Birkenhead	254	244	246	235	238	245	240	220	978	944
Claughton	7	6	6	13	7	3	4	7	24	29
Tranmere	101	104	101	113	89	76	135	103	426	396
Oxton	10	4	9	12	10	6	10	9	39	31
Higher Bebington	4	6	7	9	9	3	2	4	22	22
Union Hospital	5	4	2	3	1	4	2	0	10	11
Birkenhead Boro'	381	368	371	385	354	337	393	343	1,499	1,433

Deaths.	1st Qr.		2nd Qr		3rd Qr.		4th Qr		1878.	
	M	F.	M	F.	M	F.	M.	F	M.	F.
Birkenhead	163	168	116	105	143	112	147	170	569	555
Claughton	3	2	2	2	1	2	3	10	9	16
Tranmere	36	59	41	32	36	40	42	50	155	181
Oxton	7	7	5	3	0	2	5	4	17	16
Higher Bebington	3	2	4	1	4	2	6	5	17	10
Union Hospital..	17	8	16	12	18	18	9	13	60	51
Birkenhead Boro'	229	246	184	155	202	176	212	252	827	829

The annual rate, per 1,000 living, of births and deaths, as regards the incorporated area and the townships within it, may be displayed in tabular form thus :

1878.	Annual Rate per 1000 Living.	
	Births.	Deaths.
Birkenhead	35.67	20.86
Claughton	18.82	8.88
Tranmere	40.89	16.71
Oxton	19.41	9.15
Higher Bebington	14.23	8.73
Birkenhead Borough, including B and D in Union Hospital and Workhouse	35.12	19.83

Claughton, Oxton, and Higher Bebington are so sparsely populated, annual Birth-rates and Death-rates have comparatively little significance, though, of course, the three Birth-rates appearing so

low suggests that the population has probably been somewhat over-estimated. The persons to an acre in each of these townships in 1878 is estimated at 6·4, 4·4, and 12·6 respectively. And the sum of the births and deaths in small local communities is necessarily so small, that in districts where the population is 2,000 or 3,000 or less, a simple statement of the number born and deceased during the year conveys a clearer notion of the truth of the matter than an estimate of the rate per 1000, which one year may be exultingly announced as showing the "lowest mortality in all England," and the next may exceed that in Alexandria or St. Petersburgh.

Thus, by way of illustration, supposing that in a little hamlet containing 60 souls a rickety woman were to be confined of twins and owing to her constitutional state were to die, and supposing that the twins deprived of breast-milk were also to succumb in the course of a few days; if no other birth or death took place during the year, the local medical officer would be able truthfully to report that the annual Death-rate of the hamlet of blank was 50 per 1000 living, that the Death-rate exceeded the Birth-rate by 50 per cent., that all the Deaths were due to zymotic diseases, and that the infant mortality exceeded the adult mortality by 100 per cent.

Of course this is a pure *reductio ad absurdum*, but it will serve to show that rates as regards small communities may be the cause of quite groundless alarm, and therefore when they happen to be reassuring it is wise not to magnify their importance. As regards Claughton, Oxton, and Higher Bebington the total of the deaths during 1878 is in each case small, and but few of these deaths are ascribed to zymotic diseases. These are plain facts, and are certainly satisfactory.

In the townships of Birkenhead and Tranmere, where we are dealing with relatively large aggregates of population, and where the margin of error as regards the estimate made is much narrower, the case is different. Here the fertility and mortality of the local population is best expressed in rates per 1000 living, and in this way comparison with other urban sanitary districts is readily effected. In order that the Birth-rate and Death-rate of these townships and of the whole municipal borough, for 1878, may be compared with the corresponding rates returned from the most populous cities and boroughs in Great Britain and Ireland, we

submit the following table from the Registrar General's "Annual Summary of Births, Deaths, and Causes of Death in London and other large cities." It gives the Birth-rates and Death-rates of the twenty-three chief towns in the United Kingdom for the 52 weeks ending December, 28th, 1878 :

Cities and Boroughs.	Annual Rate per 1000 Living.	
	Births.	Deaths.
London	36.2	23.5
Brighton	29.6	21.2
Portsmouth	33 0	19.0
Norwich	33.6	24.6
Plymouth	31.9	25.3
Bristol	35.3	21.4
Wolverhampton	38.1	23.3
Birmingham	41.9	25.5
Leicester	39.4	20.8
Nottingham	35.7	21.0
Liverpool	38.8	29.4
Manchester	38.2	27.9
Salford	42.2	25.6
Oldham	38.2	25.8
Bradford	35.8	22.5
Leeds	39.2	23.8
Sheffield	37.8	25.0
Hull	42.1	24.3
Sunderland	41.5	25.6
Newcastle-on-Tyne	38.1	23.8
Edinburgh	33.2	22.1
Glasgow	36.4	24.9
Dublin	30.3	29.6
Mean	36.8	24.4

Of the twenty-three cities or boroughs in the table it will be seen that six had lower Birth-rates, and all but one had higher Death-rates, than the borough of Birkenhead; the mean Birth-rate of the great cities and boroughs being 1·7 per 1000 living higher, and the Death-rate 4·6 per 1000 living higher, than in the borough of Birkenhead. Yet the density of population in Birkenhead is greater than in some of the towns in this list: thus the number of persons to an acre at the middle of the year 1878 was in Norwich 11·3, in Leeds 14·1, in Sheffield 14·7 and in Nottingham 16·6, whereas in the borough of Birkenhead it was 21·0. The persons to an acre, in 1878, in the township of Birkenhead were 42·0, and in Tranmere 18·7. We refer to this as, *cæteris paribus*, the insalubrity of an urban district usually increases with the density of its population.

In instituting a comparison between the Death-rate of the borough of Birkenhead and the Death-rates of other towns, it should be noticed that whereas the union hospitals and workhouses of most of the cities and boroughs just named, severally receive persons from within their own boundaries only, the Union Hospital and Workhouse of Birkenhead receives from Wallasey, Liscard, Poolton-cum-Seacombe, Bidston-cum-Ford, and Noctorum. Seven of those who died in the Birkenhead Union Hospital or Workhouse during the year under review were thus derived from outside the municipal boundary. It may be assumed that some few of the patients who died in the other hospitals in the borough, those not under the control of the Poor Law Guardians, were also derived from without the municipal boundary, but considering the contiguity of a large town to Birkenhead, it is probable that the number of strangers dying in such hospitals does not exceed the number of those who, though ordinarily residing in Birkenhead, die in hospitals belonging to our neighbours.

The local Birth-rate and Death-rate may now be compared with the mean of each of the corresponding rates returned by the fifty cities and towns in England and Wales next in importance to the twenty English cities and boroughs in the table. The mean Birth-rate, in 1878, of the fifty large town districts is given in the "Annual Summary" at 37·0, and the mean Death-rate at 23·0, per 1000 living.

The Birth-rate of the whole of England and Wales, for 1878, was, according to the Registrar-General's Quarterly Returns, 35·9, and the Death-rate 21·7, per 1000 living. The Birth-rate of the United Kingdom was 34·0, and the Death-rate 21·1, per 1000 living.

The numbers derived from the Quarterly Returns are subject to revision when the causes of death and other details are finally classified.

Tabular statements of the year's mortality within the borough of Birkenhead, classified according to diseases, ages, and localities, a weekly register of deaths, and of meteorological results, a monthly summary of deaths from all causes and zymotic diseases, with the rates per 1000 per annum, together with a table specifying the occupation or "description" of each person whose death was

entered during the year, a return of deaths in the Birkenhead Union Hospital and Workhouse, and a sketch map showing the boundaries of the wards, &c., will be found appended.

Table I shows the deaths registered in the whole borough during 1878, arranged with reference to the age at which death occurred in each case. They are disposed in four sub-tables—the deaths in the townships of Birkenhead and Claughton in the first, the deaths in Tranmere (exclusive of the Union premises) and Oxton in the second, the deaths in the incorporated portion of Higher Bebington in the third, and the deaths in the Union Hospital or Workhouse in the fourth. The deaths of infants are entered up in three columns, those under one year, those of one year and under two years, and those turned two years and under five. Then follow the deaths of children and young persons, those turned five years and under twenty; and of adults, those turned twenty and under forty, and those turned forty and under sixty. In the last two columns are the deaths of old people turned sixty and under eighty, and those eighty and upwards. Reference to this table will show that of the gross local mortality for 1878, the deaths of infants accounted for 724, children and young persons for 114, adults 534, and old people 284. In the townships of Birkenhead and Claughton 525 deaths occurred among infants, 67 among children and young persons, 373 among adults, and 184 among old people. In the townships of Tranmere and Oxton the number of deaths of those under five years was 166, of children and young persons 34, of adults 109, and of old people 60.

The relative proportion of deaths, in 1878, among infants, children and young persons, adults, and old people, to the whole number of deaths, in certain sub-divisions of the borough, in the premises controlled by the Guardians of the Poor, and in the entire area incorporated, is readily shown in tabular form thus:

Percentage of Deaths at Certain Ages to Total Deaths.	Age below			60 and upwards.
	5	20	60	
Birkenhead and Claughton	45·6	5·8	32.4	16·0
Tranmere and Oxton	44·9	9·2	29·5	16·2
Higher Bebington	25·9	14·8	33·3	25·9
Union Hospital or Workhouse	23·4	8·1	38·7	29·7
Birkenhead Borough	43·7	6·8	32·2	17·1

These figures show the local mortality in a not unfavourable light. The proportion of deaths of infants to the sum of the deaths is less than it averages in large towns and populous districts, and the proportion of deaths of old people to the sum of the deaths is more than it averages in large towns and populous districts. The local mortality in 1878 compares favourably, in this respect, with the local mortality returned in previous years; as of the deaths recorded in the old Improvement District of Birkenhead, during the last ten years, fifty per cent. were of infants under five years, and only twelve per cent. were of persons three score years and upwards. The figures opposite Higher Bebington have little significance, the number of deaths at all ages being inconsiderable; nor is there any special significance in the small proportion of infants and the large proportion of old people among the deaths in the Union, the inmates of a workhouse differing from a normal population in respect of age.

There is another way of ascertaining whether the infant mortality be in excess—by finding the proportion of deaths under one year to the births registered. Measured thus the rate of infant mortality for 1878 is found to be equal to 138 per 1000 in the townships of Birkenhead and Claughton, 112 per 1000 in Tranmere and Oxton, 113 per 1000 in the incorporated portion of Higher Bebington, and 134 per 1000 in Birkenhead Borough. The rate of infant mortality in the whole of England and Wales, during the same period, was 153 per 1000 births; in the fifty large town districts it was 170 per 1000; and in the twenty most populous cities and boroughs in England it ranged from 150 per 1000 in Portsmouth to 211 per 1000 in Norwich, the mean being 172 per 1000. As this is generally considered the fairest way of computing the infant mortality, and the infant Death-rate affords a better index of the local sanitary condition than the general Death-rate, it is satisfactory to note how favourably in this respect Birkenhead compares with all the great centres of population, and with the whole country.

Among those whose deaths were registered in the borough, during 1878, were several very aged persons—two being returned as upwards of a hundred years at the time of death. One of them is entered as a joiner's wife, 102 years, and she is certified as

having died from bronchitis, at Hemingford Lodge, on March 29th. The other is entered as a weaver's widow, 101 years and 11 months, and she is certified as having died from senile gangrene, at 4 Poplar Road, Oxton, on April 10th.

Table II is the weekly Register of Deaths in the Borough of Birkenhead, for 1878. The deaths are entered as in Table I into four sub-tables, representing Birkenhead and Claughton, Tranmere and Oxton, Bebington, and the Union Hospital and Workhouse. The upper portion of Table III is a summary of this weekly register of deaths, and the lower portion is a record of meteorological results.

By way of introduction to the few observations we purpose making on the noteworthy features of the meteorology of the year, we submit the following statement of the mean temperature and atmospheric pressure, and the amount of rainfall in each month of 1878. It has been kindly prepared for us by Mr. Hartnup, of the Bidston Observatory, who also furnishes particulars of the daily observations taken under his directions.

1878.	Mean Temperature.	Mean Barometer.	Rainfall on Ground.
	°	Inches.	Inches.
January	41·5	30·107	2·820
February	42·8	30·215	1·058
March	42·5	30·063	1·237
April	49·3	29·812	1·182
May	53·8	29·722	3·991
June	59·0	29·900	2·961
July	61·7	30·037	1·075
August	61·7	29·720	4·250
September	57·2	29·925	4·146
October	51·0	29·685	2·375
November	39·7	29·796	1·606
December	34·0	29·697	1·847

The record of results in the table appended gives the mean height of barometer, the mean temperature, mean of evaporation, the rainfall in inches, the number of hours in which rain fell, the average percentage of cloud to clear sky as adduced from two daily observations, the mean hourly horizontal motion of air in miles, and the percentage of time westerly winds prevailed, for the fifty-two weeks ending December 28th, 1878.

By the table we see (1) that the mean of the barometer was

a little higher in 1878 than in 1877, but a little lower than the average; in the first quarter of the year it was markedly higher than it averages in this quarter, or than it was in the corresponding quarter of 1877, in the remaining three quarters it was lower than the average and lower than in the corresponding quarters of 1877: (2) that the mean temperature in 1878 was within a fifth of a degree the same as in 1877 and the average mean; in spring and summer it was a little higher but in the winter much lower, as compared with the previous year and the mean winter temperature: (3) that the rainfall of 1878 was an inch less than the average fall and ten inches less than the rainfall of 1877; in the first, third, and fourth quarters of the year the rainfall was less than in the corresponding quarters of 1877 or than the mean fall for these quarters, in the second quarter it was in excess of the rainfall of 1877 and of the mean fall. The number of hours in which rain fell is set down at 525, a total somewhat less than the average, and less by 170 than in 1877. The proportion of cloud to clear sky was in 1878 rather less than in the previous year, but not less than the mean proportion. Westerly winds were somewhat less prevalent in 1878 than in the previous year, and the amount recorded is slightly below the average. Notes of the wind force, that is to say of the mean hourly horizontal motion of the air, are issued this year for the first time; the column giving the weekly mean of evaporation (humidity) is also inserted this year for the first time.

The main facts of the year as regards the weather were thus: high barometer readings in the first quarter, an exceptionally rainy second quarter, and a mean temperature about three and a-half degrees lower than the average in the fourth quarter.

The year's meteorology naturally introduces the next subject to be considered, the distribution of the mortality over the four quarters; as the relative mortality of different portions of the year must necessarily be affected by the atmospheric conditions which have marked its progress. Of the sum of the deaths registered in the townships of Birkenhead and Claughton, 336 were entered to the first quarter, 225 to the second, 258 to the third, and 330 to the fourth; of the sum of the Tranmere and Oxton deaths 109 appear in the first quarter, 81 in the second, 78 in the third, and 101 in the fourth. In Bebington the numbers of the deaths

registered in the four quarters were respectively 5, 5, 6, 11; and in the Union Hospital or Workhouse the numbers were 25, 28, 36, 22. The death totals were therefore much higher in the first and fourth than in the intervening quarters, both as regards the whole borough and its principal sub-divisions. It is scarcely necessary to remark that the number of deaths recorded in the first and last quarters being proportionately high, and the number of deaths recorded in the second quarter being low, is not unusual.

The following table shows at a glance the relative mortality of the four quarters in the borough and in certain portions of it, stated as the percentage of the year's deaths occurring in each quarter.

Percentage of Quarters' Deaths to Year's.	Quarters.			
	1st.	2nd.	3rd.	4th.
In Birkenhead and Claughton	29·2	19·5	22·4	28·7
In Tranmere and Oxton	29·5	21·9	21·1	27·3
In Bebington & Union Hospital, &c.	21·7	23·9	30·4	23·9
In Birkenhead Borough	28·6	20·4	22·8	28·0

The increased Death-rate which obtained during the "cold quarters" is not wholly due to the increased fatality of inflammatory diseases of the lungs, but in great part to the prevalence of whooping-cough during the earlier months of the year and measles in the last quarter.

The causes of death, as they appear in Tables I and II in the appendix, are systematically arranged in accordance with the principles laid down by Dr. W Farr, the nosology being that adopted by the Registrar-General, and which experience has shown to be the best for statistical purposes. The death-causes are grouped under classes and orders, the latter corresponding to the "Families" of Natural History. Genera, what in diseases would be called varieties, are not distinguished. All death-causes are thus conveniently classified under 116 heads, some of which, however, include diseases very distinct from one another.

At the beginning of Table I appear the totals of deaths from all causes, and on the next line the totals of deaths from specified causes. The deaths which we are obliged to refer to unspecified

causes are not only those ascribed to "visitation of God," "natural causes," &c., but those which with almost equal vagueness are certified as due to "tumour," "abscess," "coma," &c. The deaths from specified causes are then divided into five classes Class I (the zymotic) embraces all diseases, either epidemic, endemic, or contagious, which are induced by some specific body, or by want of or by the bad quality of food. Constitutional or cachectic diseases (Class II) appear to be due to a bad habit of body, and are sometimes hereditary. Class III takes in diseases the effects of which are manifest in disturbing or obliterating the functions of particular organs or systems. Class IV includes the conditions tending to produce death, which are the incidental result of the formative, reproductive, and nutrative processes. Class V groups together all deaths which are the evident and direct result of physical or chemical forces.

Of the 1631 deaths from specified causes registered in the borough, during the year 1878, 383 were ascribed to zymotic diseases, 242 to constitutional disease, 674 to local diseases, 264 to developmental diseases, and 68 to violence. The proportion of zymotic diseases to the whole number of deaths was 23·1 per cent.; in the townships of Birkenhead and Claughton it was 23·4 per cent.; in Tranmere and Oxton it was 22·4 per cent.; and in Higher Bebington 22·2 per cent. The proportion deaths ascribed to zymotic diseases bear to deaths from all causes is however a matter of no great significance, as of course the general Death-rate varies considerably and any cause increasing this makes the number of zymotic diseases, thus compared, relatively less.

A correct estimate of the fatality from zymotic diseases and from the other four classes of death-causes just referred to can only be made by taking out the Death-rate per 1000 living, as respects each of the five classes. This has been done and the results are displayed in the table annexed. The Death-rates in the column referring to the whole borough are from totals including the deaths which took place in the Union Hospital or Workhouse, the Death-rates in the remaining three columns are from totals which do not include deaths within premises belonging to the Union.

Classes.	Annual Rate per 1000 Living.			
	In whole Borough.	In Birkenhead and Claughton.	In Tranmere and Oxton.	In Higher Bebington.
Zymotic Diseases	4.59	4.76	3.50	1.94
Constitutional Do.....	2.89	2.73	2.53	.97
Local Do.....	8.07	8.48	6.41	4.20
Developmental Do.....	3.16	2.87	2.74	.64
Violent Deaths	.81	1.07	.16	.97

It will be seen by this table that no class of diseases was specially prevalent in 1878. The Death-rate in each case is about equal to the mean of previous years; and the rates as respects all the death-causes are appreciably lower in what used to be called the out-townships than in the old Improvement District where the density of population is so much greater.

The 383 deaths referred to zymotic diseases include 326 by the so-called chief zymotics (certain selected diseases in the miasmatic order), viz., measles 72, scarlatina 28, diphtheria 14, whooping-cough 90, fevers 48, and diarrhœa 74. The remaining 57 are entered to what have been termed minor zymotics (diseases less prevalent, or less fatal or less obviously zymotic in character), viz , croup 12, erysipelas 11, rheumatism 10, syphilis 8, alcoholism 8, inanition of infancy 3, and one each ague, stricture of urethra, hydrophobia, thrush, and worms.

The mortality in 1878 from the chief zymotics is, like the gross zymotic mortality, not in excess of the local mean in previous years; and it compares not unfavourably with other urban mortalities during the same period. The mean Death-rate from the chief zymotics in the twenty most populous English towns is returned as 4·4 per 1000 living, and in the fifty large town districts next in importance to the twenty towns it is returned as 3·9 per 1000 living, which is exactly the rate in the borough of Birkenhead.

The Death-rates in respect of the principal and other zymotics, during 1878, are given in the next table. In making the calculation for the whole borough deaths in premises belonging to the Union were included; in making the calculation for Birkenhead and Claughton, and for Tranmere and Oxton, they were excluded. No separate calculation has been made for Higher Bebington, as

the sum of the deaths by zymotic diseases in the incorporated portion was only six.

Zymotic Diseases.	Annual Rate per 1000 Living.		
	In whole Borough.	In Birkenhead and Claughton.	In Tranmere and Oxton.
Measles	.86	1.04	.42
Scarlatina	.33	.24	.50
Diphtheria	.16	.05	.42
Whooping-cough	1.07	1.35	.46
Fevers	.57	.51	.25
Diarrhœa	.88	.84	.88
Other Zymotics	.68	.70	.54

The zymotic diseases locally somewhat exceptionally fatal, in 1878, were measles and whooping-cough. Measles appeared in Birkenhead (township) in March, and was more or less prevalent during the remainder of the year. During the last six weeks of the year the mortality greatly increased, the malady spreading to Tranmere. Of the 72 fatal cases, 32 were registered in this six weeks. The only other disease which assumed epidemic proportions, in 1878, was whooping-cough. It proved fatal in seven cases in December, 1877, and it continued prevalent, especially in the township of Birkenhead, up to nearly the end of the third quarter of 1878. Of the 90 deaths ascribed to whooping-cough, in 1878, 52 were returned in January, February, and March.

With these two exceptions the borough was singularly free from zymotic diseases. Scarlatina and diphtheria were only fatal in a few isolated cases, mainly in Tranmere. The deaths from diarrhœa were markedly below the average, and they were nearly equally distributed over the different parts of the borough. About two-thirds occurred in the summer quarter (July, August and September), and three-fourths of those who died from this cause were infants under two years. The fever Death-rate is the mean rate. Of the whole number of deaths 29 occurred in the townships of Birkenhead and Claughton, and but six in Tranmere and Oxton. Thirteen occurred in the Workhouse Hospital. Nearly half of the year's deaths were entered in the first quarter. Eighteen

of the fatal cases of fever were certified as typhus, twenty as typhoid, and ten as simple fever.

The diseases grouped together as "other zymotics" afford little occasion for comment. The number of deaths referred to croup is below the average, while the number referred to erysipelas is a little above the average. Only three deaths are ascribed to inanition of infancy and only 8 to congenital syphilis—we wish we were warranted in believing that the number of infants who yearly succumb to either of these two death-causes could be thus fairly represented in units. The sum of the deaths attributed to alcoholism is in excess of the mean. A death from hydrophobia is, we believe, quite unprecedented in this locality. It may therefore be of interest to note that the case in the register for 1878 was well authenticated, having been for some days under observation. The subject of this disease was a blacksmith, 41 years of age, and his death occurred at Vulcan-street on December 5th.

These brief notes on the local zymotic mortality may be appropriately supplemented by a statement of facts as to the sickness from smallpox which came within the knowledge of the sanitary authority during the year under review. It is a source of great satisfaction to us that we are able to report that no death from smallpox took place within the borough, and our satisfaction is not diminished when we reflect that this is no mere fortuitous escape but is due to the protected state of the population. In the Report for 1877 a full account was given of the arrangements made for vaccinating unvaccinated persons and for re-vaccinating those in whom the vaccinal cicatrices were indistinct or obliterated. It now only remains for us to say that these special arrangements were successful, the object sought having been obtained. Thus Birkenhead entered upon the year 1878 having a population as thoroughly and efficiently vaccinated as any in the kingdom. This was fortunate, as the two occasions in which smallpox is known to have been imported into the district were both in the early months of the year. In March the disease was brought to a house in New Chester-road, and there communicated by the primary patient to her brother's infant. From one of these patients the disease spread to a child, a relative, residing in Grove-road, and one or more children in the immediate locality. The information is not very precise,

as the outbreak was not reported, and though it appeared within the incorporated area it was before a medical officer for the borough had been appointed. However, all the patients appear to have had the disease in a modified form, and fairly successful attempts seems to have been made to isolate them as far as practicable. The second importation of smallpox into this town, the sanitary authority received advice of almost as soon as the case was discovered. Late on the night of April 5th a report reached one of the inspectors that a young man, lodging at 16, Cathcart-street, was suffering from the disease. As early as possible on the next day the patient was removed to the Fever Hospital, and the room occupied by him was disinfected and his bedding burned. On the 9th the whole house was disinfected and cleansed. The occupants of the house, a man and wife and four children, were all vaccinated, except the eldest of the children who had suffered from confluent smallpox. Re-vaccination was offered and accepted in the case of two of the children. The patient (age 19) was a stoker in the service of the Pacific Steam Navigation Company, and the vessel in which he arrived docked on March 22nd, having seven and a half days previously left Vigo, where smallpox was prevalent. By the patient's own account he sickened on March 31st, and the first appearance of the eruption was on April 3rd. We note these dates as they show that the earliest premonitory signs of the disease occurred 13½ days after the time the subject was exposed to infection, and that the eruption did not begin to appear till at least 16½ days after the time the subject was exposed to infection. The disease was in a modified form, the patient having been vaccinated in infancy, three faint cicatrices still being visible. The patient made a quick recovery and was discharged from hospital on May 3rd.

Having given the Death-rates in the borough, and certain sub-divisions of it, so far as regards the five classes into which death-causes have been divided, and the principal and other zymotics; we now submit a table showing the Death-rates in the borough and certain sub-divisions of it, so far as regards the orders into which the death-causes belonging to Classes II, III, and IV have been grouped. No separate calculation has been made for Higher Bebington, as the sum of the deaths coming under these three classes the incorporated portion was only eighteen.

Constitutional, Local, and Developmental Diseases.	Annual Rate per 1000 Living.		
	In whole Borough.	In Birkenhead and Claughton.	In Tranmere and Oxton.
Diathetic Diseases	·50	·38	·50
Tubercular Diseases	2·39	2·34	2·02
Diseases of Nervous System.....	2·49	2·55	2·10
,, Organs of Circulation...	1·13	1·04	1·09
,, Respiratory Organs	3·16	3·63	1·94
,, Digestive Organs	·88	·79	1·01
,, Urinary Organs	·26	·26	·25
,, Organs of Generation	·03	·05	·
,, Organs of Locomotion	·02	·03	·
,, Integumentary System	·07	·10	·
Developmental Diseases of Children ...	·91	·88	1·01
,, ,, Adults	·14	·10	·25
,, ,, Old People	·77	·67	·50
Diseases of Nutrition.....	1·32	1·21	·97

The two orders under which constitutional diseases have been arranged have little in common except that in the typical disease in each order new morbid products are deposited. Diathetic diseases account for 42 deaths, of which 27 were due to cancer, 8 to dropsy, 4 to mortification, and 3 to cancrum oris. The last named is a disease of infancy. Of the remaining 39 who died 37 were adults of 40 years and upwards. Tubercular diseases account for 200 deaths, of which 155 were due to phthisis pulmonalis, 19 to scrofula, 16 to hydrocephalus, 9 to tabes mesenterica, and one to blood-spitting. Of the 200, 35 appear in the register as children under five years, and two as old people of sixty or upwards.

Of the eight orders under which local diseases have been arranged, the first four account for an overwhelming proportion of the mortality referable to this class. The deaths ascribed to diseases of the brain and nervous system were, in 1878, 208, the deaths ascribed to disease of the heart and bloodvessels were 95, the deaths ascribed to diseases of the respiratory organs were 264 and the deaths ascribed to diseases of the digestive organs were 74. The deaths entered to the diseases coming under the remaining four orders were 33. In just one-third of the deaths attributed to local diseases, the subjects were infants under five years of age. Owing to the large number of deaths certified as

from local diseases which are due to the effects of inflammation, the mortality by local diseases always falls in the spring and rises with the return of the cold weather; thus 404 of the fatal cases of local diseases in 1878 appear in the first and last quarters, and but 270 in the second and third quarters.

Of the death-causes in Class IV, 76 were carried to the developmental diseases of children, *i.e.* premature birth, malformations and teething, 12 to the diseases and conditions incidental to tedious or complicated travail, 65 to old age, and 111 to the so-called diseases of nutrition, that is to say atrophy, debility and marasmus.

The number of inquests held during 1878 was 94, thus 5.6 per cent. of the sum of the deaths in the borough formed the subject of judicial inquiries. Eighty-two of the inquests were in the township of Birkenhead, six (including one at the Workhouse) were in Tranmere, four were in the incorporated portion of Higher Bebington, one was in Claughton, and one in Oxton.

Not all the death-causes which are classified represent diseases or symptoms observed and certified by medical men in attendance, or verdicts following official investigations. A significant proportion of the death-causes were entered in the register on the doubtful testimony of deceased persons' friends, or relatives, or fellow lodgers. In an analysis of the mortality of a district the number of such deaths should always be noted; the registrars have therefore been required to mark in the returns furnished every death not certified by a registered practitioner or made the subject of a coroner's inquest. In 1878, out of the 1656 deaths registered, 48 were marked "not certified," that is 2·8 per cent. of the whole number. Twenty-two were males and 26 females. The age of the deceased in eight cases was stated to be upwards of 30 years, the remaining 40 being recorded as under five years of age. Of the 40 exactly half were under ten days old. The causes of the 48 deaths have been entered, in accordance with the statements of persons giving information to the registrars, as follows:—

5 to zymotic diseases, viz:—2 to measles,
2 to diarrhœa, and
1 to croup.

1 to dropsy,

2 to phthisis,

1 to hydrocephalus,
1 to paralysis,
10 to convulsions,
3 to heart disease,
1 to laryngismus stridulus,
1 to chronic bronchitis,
1 to pneumonia,
1 to disease of lungs,
15 to premature birth,
5 to debility, and
1 to hæmorrhage.

As there was resident in Birkenhead, in 1878, a practitioner who, though not registered, possessed a registerable qualification, it is perhaps fair to assume that a few of the above deaths may have been certified to by him. Indeed this seems the only way to account for the appearance in the list of some of the technical expressions made use of. The alleged cause of death in most of the uncertified entries, is however absolutely valueless, and must be accepted merely as representing the opinion of a herbalist or bedside watcher. It is an ugly fact that five-sixths of these uncertified deaths should be of infants. If professional advice is not obtained for an adult when sick it may be owing to his own default, but if it is not obtained for a sick infant it is obviously referable to the neglect of others. We say this advisedly, for in view of the facilities afforded in Birkenhead for obtaining medical relief, no one can plead poverty as an excuse for not doing his duty to his child in this respect. In any case in which the services of a qualified medical man were not procured, they were probably not sought. Finally, we cannot help noticing what a large number of these poor children have their deaths ascribed to premature birth. A midwife is usually the person furnishing particulars of the cause of death in such cases, and on looking over the entries one finds a monotonous succession of "labourer's daughters" and "servant's sons," their addresses being the squalid courts and alleys so familiar with death, but where it must always be too soon to be born.

Having now fully discussed Tables I, II, and III, in the appendix, we come to Table IV, in which the deaths registered during 1878 are classified according to the localities in which they occurred. This "street register" is divided into three parts. The

part marked "A" includes the streets and places in the old Birkenhead Improvement District, the part marked "B" the streets and places in Tranmere and Oxton, and the part marked "C" the streets and places in the incorporated portion of Higher Bebington. Opposite each street or place is the number of deaths, from all causes and from zymotic diseases, registered as taking place in that street or place during the year. In the headings to the different parts of this Table, (and in Tables I, II, and III) we have not placed the names of townships as indicating the locality referred to but the names of wards. The old Improvement District consisted of the township of Birkenhead, now divided into Cleveland, Grange, and Argyle Wards; and the township of Claughton, now called Claughton Ward. The township of Oxton is now called Oxton Ward; and the township of Tranmere is divided into Egerton, Clifton, and Mersey Wards. The portion of Higher Bebington incorporated is called B bington Ward. As we thought that particulars as to the number of deaths from all causes, from zymotic diseases, and from causes not certified, in each ward, might prove interesting, and the street register does not afford this information, we have drawn up the table here submitted. A few of the deaths could not be classed, as so many of the streets in the borough run through two or more wards or form the boundaries between wards, and the person acting as informant to the registrar is occasionally unable to give the number of the house in which the death took place; and a sudden death is sometimes entered without even the name of the street where it took place being inserted.

Wards.	Deaths from all Causes.		Deaths from Zymotic Diseases.		Deaths from Causes Uncertified.	
	M.	F.	M	F.	M.	F.
Cleveland	154	133	36	42	3	5
Claughton	9	16	3	2	...	...
Grange	211	214	47	53	5	7
Argyle	180	201	42	44	9	10
(Locality not Specified).....	24	7	..	1	...	...
Oxton	17	16	4	1	...	...
Egerton	37	52	10	18	1	1
Clifton.....	66	89	10	16	3	3
Mersey	50	40	12	12	1	...
(Locality not Specified).....	2	...	...	...	...	...
Bebington	17	10	5	1	...	...

This table will, with the street register, furnish all the information that can be required on the subject. The streets counting up the greatest number of deaths are Brook-street, Price-street and St. Anne-street, but this is mainly because these streets contain the largest number of houses. The streets in which the mortality has been really highest appear to be Thomas-street, Field-street, Eldon-place, Warwick-street, Oak-street, Vine-street, Byrom-street, Back Beckwith-street, Queen's-buildings, Queen's-place, Oaktree-place and Pitt-street. The localities in which there has been most sickness, most fever, and where the mortality from zymotic diseases has been relatively highest, are certainly Godfrey's-terrace, Howard-street, and Walton-street.

As a supplement to the street register it has been deemed advisable to add a return of the deaths in the Union Hospital and Workhouse, giving in each case the address of deceased when admitted into the Union, and some information as to the period of his admission. The sex, age, occupation, date and cause of death, are extracted from the register, and the information in the last column has been supplied by the Master of the Workhouse. It will be seen that the particulars, as filled in, are not sufficiently precise to enable us to refer the death-causes to the several wards from which the deceased were drawn. The return is however sufficiently interesting to deserve a place in the appendix, and it enables us to submit a summary of the localities from which patients dying in the Union were received.

Localities from which Patients dying in Union were received.	Year when admitted to Union.							Total.
	1872	1873	1874.	1875.	1876.	1877	1878.	
Birkenhead	1	2	3	1	1	12	61	81
Claughton	...	...	...	...	...	...	...	0
Tranmere	...	...	...	1	...	3	13	17
Oxton	...	...	...	...	...	...	...	0
Higher Bebington	...	...	...	...	...	...	1	1
Seacombe	...	...	..	1	...	1	1	3
Liscard	...	...	...	1	...	...	2	3
Egremont	...	...	...	...	...	...	1	1
Union Schools	...	...	...	...	...	...	1	1
(Born in Workhouse)	...	...	...	...	...	1	...	1
(Address unknown)	...	...	...	...	...	...	3	3
Total	1	2	3	4	1	17	83	111

It thus appears that 7 out of the 111 patients who died in the Birkenhead Union, in 1878, were derived from outside the municipal boundary.

Table V in the appendix shows the general and zymotic mortality month by month throughout the year. The Death-rate from all causes and zymotic diseases was lowest at midsummer and highest in February and March.

The last of the tables appended, Table VI, gives the "description" of all those whose deaths have been registered during the year. The information is furnished in each case by the person registering the death, and is, doubtless, trustworthy. The table it is thought may be of some use in supplying the material for making a rough estimate of the effects of the year's mortality on the local community; *i.e.*, the loss sustained by the professional and commercial classes, the artisan and labouring classes, and that largest class of all, the non-productive. Those also employed in any recognised form of skilled or unskilled labour may now see the number of deaths referred to fellow workers in the borough.

The number of bread-winners removed by death from the local community, in 1878, is computed thus:—the first two columns of Table VI are cast and added together, giving 453, and from this is subtracted the sum of those described as annuitants, pensioners, gentlemen, retired tradesmen, of no occupation, or whose occupation is "unknown," which leaves 419. It does not, of course, follow that everyone described as belonging to a particular trade or calling was necessarily working for a living within a reasonable time of his or her decease, nor that everyone described as a son, daughter, wife or widow was non-productive or merely occupied with domestic duties. Still, 419 may be regarded as a proximately correct estimate of those among the deceased who were self-supporting and family-supporting, as distinguished from those who were wholly dependent or only partially self-supporting. The number of those who must have been wholly dependent on others may be calculated from the figures in the age table.

The sketch map of the borough which has been added shows the boundaries of the wards, and the position of the houses in which deaths from zymotic diseases have occurred. The fatal cases of zymotic diseases received into the Union Hospital have not been

referred to the localities from which they were drawn simply because the information available would not admit of this being done.

The ordinary sanitary operations of this department have received unremitting attention. House to house inspections of the cottage property in the borough have been regularly made, gullies and passage drains have been periodically cleansed, public fountains &c. have been scoured and kept in order, and the systematic removal of ashpit refuse at stated intervals has been carefully superintended.

As the department is provided with no special night-inspector, the regulation of cellar dwellings and common lodging-houses, and the repression of overcrowding in so-called "tenement houses," present unusual difficulties. Many cellar dwellings in the borough, occupied previous to the passing of the Public Health Act, and which just come within the description of cellars lawfully occupied, are not quite suitable habitations for human beings. What shall be said, then, when cellars the conditions of which do not bring them within this description are used as dwellings! Yet how is this to be prevented in the absence of regular night inspection? A cellar "occupied as a dwelling," as defined by the Statute, means a cellar "in which any person passes the night."

The summary of nuisances investigated and dealt with during 1878, as usually returned to the Local Government Board on a form supplied, is as follows:—

Number of nuisances reported	1768
Number abated without formal notice	120
Number of formal notices given.....	1648
Number abated after formal notice and without proceedings.....	1598
Number of cases in which proceedings were taken	30
Number abated after proceedings	20

A brief statement of the other measures taken, in 1878, for correcting or getting rid of whatever appeared to be prejudicial to health is subjoined.

Sanitary defects reported by the Inspectors and referred for the action of the Town Surveyor	220
Houses or parts of houses specially disinfected with sulphurous acid or other disinfectants	120
Notices to whitewash and efficiently cleanse dirty houses given and complied with	90
Parcels of infected bedding and clothes destroyed	15
Carcases of dogs and cats removed from pools or waste land and buried	324

The Superintendent of Markets and Abattoir, Mr. Gregory, has furnished the following particulars of meat unfit for human food, seized and destroyed :—

Beef	7,282	lbs.
Salt beef	7,776	,,
Mutton	1,720	,,
Salt mutton	2,240	,,
Veal	397	,,
Lamb	707	,,
Pork	11,966	,,
Meat seized in 1878	32,088	lbs.

A small box of salt fish (321lbs.) and 26 cwt. of oysters were also seized in the course of the year.

In July the Health Committee sanctioned the establishment of an artificial manure works within the borough. The premises are situated in Cleveland Ward, on a site adjoining the Honduras Sheds, and thus it is believed sufficiently far removed from houses used as dwellings. The operations are conducted in a cleanly manner, and the only "noxious vapour" evolved appears to be a small quantity of sulphurous acid.

The Fever Hospital, which during the smallpox epidemic of 1877 rendered such invaluable services to the local community, continues to afford the sanitary authority the means of isolating and treating the subjects of zymotic diseases. Every year brings us new proof of the estimation in which it is held by the members of the medical profession, and of the goodwill and confidence of those

for whose benefit it was established. The usefulness of the institution was perhaps hardly in proportion to its size and capacity, but of course the annual number of patients received into a hospital for the accommodation of cases of infectious disease necessarily varies greatly, and the good offices of such a hospital not being taxed to the utmost in any particular year need scarcely occasion regret. The number of patients received into the Fever Hospital during 1878 was 43, and if to this be added the three patients who were inmates at the beginning of 1878 the sum of the patients treated in the year under review is 46. Only 22 of them were received from houses in the borough. The number of patients admitted from neighbouring townships would probably have been larger, but that on July 2nd the Health Committee passed a resolution that from henceforth no patients from without the incorporated area be received into the Fever Hospital.

A list of the localities making use of the hospital, with particulars of the specific diseases of the patients received from each, has been prepared. The case appearing in the column marked "no disease" was a domestic servant, who was admitted in due course on the certificate of a local practitioner stating that she was suffering from an infectious fever. She was retained for upwards of a week, but as no symptoms of fever appeared she was then discharged.

Localities.	Smallpox.	Measles.	Scarlatina.	Typhus Fever.	Enteric Fever.	Rheumatic Fever.	No Disease.
Birkenhead	1	...	2	7	6	...	...
Tranmere	...	...	...	...	5	...	...
Oxton	...	1	...	...	...	...	...
Lower Bebington	...	...	..	...	1	..	...
Seacombe	...	...	...	1	1	...	...
Egremont	...	...	...	...	...	1	..
Liscard	...	...	...	...	14	...	...
New Brighton	...	...	...	...	...	...	1
Landican	.	...	...	...	1	...	...
Ship "Conway"	...	..	2	...	...	...	...
Ship "Indefatigable"	...	...	...	...	2	...	..
Total	1	1	4	8	30	1	1

Particulars as to results are given in the next table :—

Diseases.	M.	F.	Recovered.		Died.	
			M.	F.	M.	F.
Smallpox admitted	1	...	1	...	...	...
Measles ,, ...	...	1	...	1	...	...
Scarlatina ,, ...	4	...	4	...	...	...
Typhus Fever ,, ...	3	2	2	1	1	1
,, remaining	1	2	1	2	...	...
Enteric Fever admitted.....	17	13	15	13	2	...
Rheumatic Fever ,, ...	...	1	...	...	..	1
No Disease	...	1	...	...	...	...
	26	20	23	17	3	2

Thus out of the 45 cases of febrile disease treated 5 died, *i.e.* 11 per cent. Of the two fatal cases of typhus one was a labourer sent in from Brook-place who only survived his removal one day; and the other was an old woman in her sixty-sixth year sent in from Park-street, who died four days after being admitted. Of the two fatal cases of enteric fever one was received from Midland-street and survived the transfer two days; the other was admitted from Liscard on a note from the parish authorities and was in hospital ten days. As the fatal case of rheumatic fever came from Egremont, the subjects of two of the deaths which took place in the Fever Hospital were derived from places outside the borough boundaries. Among the patients suffering from typhus was the matron of the hospital. She had the disease badly and was for some days delirious; however she made a rapid recovery and was able to get up in the fourth week. Fortunately this happened when the hospital was empty. The last patient, a typhus case, had been discharged on June 19th, and almost immediately after the matron showed signs of being affected. The matron was the sole patient under treatment till July 7th. There were no patients remaining in hospital at the close of the year, the last two cases having been discharged on December 31st.

In conclusion we avail ourselves of the opportunity afforded us by the issue of this Report to express our gratitude to the Legislature for the three sanitary measures which were added to the Statute Book in 1878. We have been discussing health and mortality and the steps taken by the local authority for the cor-

rection or repression of conditions prejudicial to life and health; and we hail with satisfaction the passing of enactments which will check the spread of disease or practices predisposing to disease, and give increased facilities for sanitary operations. Such enactments are the Factory and Workshop Act, the Public Health (Water) Act, and the Contagious Diseases (Animals) Act, and we expect much from them. The last named had to encounter a very considerable amount of opposition, and was only just passed in the last days of the session.

FRANCIS VACHER.

BIRKENHEAD, June, 1879.

APPENDIX.

TABLE I.—Deaths registered in the Borough of Birkenhead during the year ending December 31st, 1878, classified according to age.

TABLE II.—Weekly Register of Deaths in the Borough of Birkenhead for the year ending December 31st, 1878.

TABLE III.—Weekly condensed Register of Deaths and Meteorological Results for 1878.

TABLE IV.—Street Register of Deaths—1878.

A. Cleveland, Claughton, Grange and Argyle Wards.

B. Oxton, Egerton, Clifton and Mersey Wards.

C. Bebington Ward.

SUPPLEMENT TO TABLE IV.—Return of Deaths in Birkenhead Union Hospital and Workhouse, registered in 1878.

TABLE V.—Monthly totals of Deaths from all causes and Zymotic Diseases, in 1878, with the rates per 1000 per annum.

TABLE VI.—"Description" of those who Died during 1878.

SKETCH MAP of the Borough of Birkenhead showing the boundaries of the Wards, and the position of houses in which Deaths from Zymotic Diseases took place in 1878.

TABLE 1.—Deaths Registered in the Borough of Birkenhead, during the Year ending December 31st, 1878.

Class	Causes of Death	Cleveland, Claughton, Grange, and Argyle Wards — M	F	Total	Oxton, Egerton, Clifton, and Mersey Wards — M	F	Total	Bebington Ward — M	F	Total	Union Hospital — M	F	Total	Sum — M	F	Total
	All Causes	578	571	1149	172	107	279	17	10	27	60	51	111	827	820	1650
	Specified Causes	566	564	1130	169	105	274	17	10	27	60	50	110	812	810	1631
	(Classes.)															
I.—	Zymotic Diseases	128	142	270	36	47	83	5	1	6	18	11	21	182	201	383
II.—	Constitutional Diseases	70	85	155	21	36	60	2	1	3	15	9	24	111	131	242
III.—	Local Diseases	243	239	481	75	77	152	6	7	13	16	12	28	339	335	674
IV.—	Developmental Diseases	77	86	163	30	35	65	1	1	2	10	18	28	121	140	264
V.—	Violent Deaths	49	12	61	4	....	4	0	....	3	....	....	....	50	12	68
	(Orders.)															
I.—	1. Miasmatic Diseases	118	131	249	33	44	77	4	1	5	11	11	22	160	191	360
	2. Enthetic "	6	1	7	2	1	3	....	....	....	....	....	....	8	2	10
	3. Dietic "	4	2	6	1	1	2	1	....	1	2	....	2	8	3	11
	4. Parasitic "	....	1	1	....	1	1	....	....	....	....	....	....	....	2	2
II.—	1. Diathetic Diseases	5	17	22	4	8	12	....	....	....	7	1	8	16	20	42
	2. Tubercular "	65	68	133	20	28	48	2	1	3	8	8	16	95	105	200
III.—	1. Diseases of Nervous System	93	52	145	25	25	50	2	3	5	3	5	8	123	85	208
	2. " Organs of Circulation	28	51	79	13	13	26	2	1	3	4	3	7	47	48	95
	3. " Respiratory Organs	89	117	206	21	22	43	....	2	2	6	4	10	116	146	264
	4. " Digestive Organs	21	24	45	9	15	24	2	1	3	2	....	2	34	40	74
	5. " Urinary Organs	9	6	15	4	2	6	....	....	....	1	....	1	14	8	22
	6. " Organs of Generation	....	3	3	....	....	....	....	....	....	....	....	....	....	3	3
	7. " Organs of Locomotion	....	2	2	....	....	....	....	....	....	....	....	....	....	2	2
	8. " Integumentary System	2	4	6	....	....	....	....	....	....	....	....	....	2	4	6
IV.—	1. Developmental Diseases of Children	28	22	50	13	11	24	1	....	1	1	....	1	43	33	76
	2. " " Adults	....	6	6	....	6	6	....	....	....	....	....	....	....	12	12
	3. " " Old People	16	22	38	5	7	12	....	1	1	7	7	14	28	37	65
	4. Diseases of Nutrition	33	36	69	12	11	23	....	....	....	8	11	19	53	58	111
V.—	1. Accident or Negligence	43	9	52	3	....	3	2	....	2	....	....	....	48	9	57
	4. Suicide	3	2	5	1	....	1	....	....	....	....	....	....	4	2	6
	Violent Deaths not classed	3	1	4	....	....	....	1	....	1	....	....	....	4	1	5
I.—	Order 1.															
	2. Measles	31	28	59	4	6	10	....	....	....	2	1	3	37	35	72
	3. Scarlatina	6	8	14	7	5	12	1	....	1	1	....	1	14	14	28
	4. Diphtheria	....	1	3	6	4	10	....	1	1	....	....	....	8	6	14
	6. Croup	7	5	12	....	....	....	....	....	....	....	....	....	7	5	12
	7. Whooping-cough	32	45	77	3	8	11	2	....	2	....	....	....	37	53	90
	8. Typhus Fever	2	8	10	....	1	1	....	....	....	3	4	7	5	13	18
	Enteric or Typhoid Fever	6	7	13	1	3	4	....	....	....	2	1	3	9	11	20
	Simple continued Fever	....	6	6	1	....	1	....	....	....	1	2	3	2	8	10
	9. Erysipelas	3	6	9	....	2	2	....	....	....	....	....	....	3	8	11
	14. Diarrhoea	28	20	48	10	11	21	1	....	1	1	3	4	40	31	71
	16. Ague	....	....	....	....	1	1	....	....	....	....	....	....	....	1	1
	18. Rheumatism	1	4	5	1	3	4	....	....	....	1	....	1	3	7	10
	Order 2.															
	1. Syphilis	4	1	5	2	1	3	....	....	....	....	....	....	6	2	8
	2. Stricture of Urethra	1	....	1	....	....	....	....	....	....	....	....	....	1	....	1
	3. Hydrophobia	1	....	1	....	....	....	....	....	....	....	....	....	1	....	1
	Order 3.															
	2. Inanition of Infancy	2	1	3	....	....	....	....	....	....	....	....	....	2	1	3
	4. Alcoholism—Delirium Tremens	2	....	2	1	....	1	1	....	1	2	....	2	6	....	6
	Intemperance	....	1	1	....	1	1	....	....	....	....	....	....	....	2	2
	Order 4.															
	1. Thrush	....	....	....	....	1	1	....	....	....	....	....	....	....	1	1
	2. Worms	....	1	1	....	....	....	....	....	....	....	....	....	....	1	1
II.—	Order 1.															
	2. Dropsy	1	....	1	2	3	5	....	....	....	2	....	2	5	3	8
	3. Cancer	4	15	19	2	4	6	....	....	....	1	1	2	7	20	27
	4. Cancrum Oris	....	2	2	....	....	....	....	....	....	1	....	1	1	2	3
	5. Mortification	....	....	....	....	....	....	....	....	....	2	....	2	2	....	2
	Gangraena senilis	....	....	....	....	1	1	....	....	....	1	....	1	1	1	2
	Order 2.															
	1. Scrofula	7	5	12	2	1	3	....	....	....	1	3	4	10	9	19
	2. Tabes Mesenterica	1	3	4	....	4	4	....	....	....	....	....	....	2	7	9
	3. Phthisis	51	58	112	13	16	29	1	1	2	7	5	12	76	81	155
	Haemoptysis	1	....	1	....	....	....	....	....	....	....	....	....	1	....	1
	4. Hydrocephalus	2	2	4	5	7	12	....	....	....	....	....	....	7	9	16
III.—	Order 1.															
	1. Cephalitis	9	6	15	4	7	11	....	....	....	....	....	....	13	13	26
	Myelitis	2	....	2	....	....	....	....	....	....	....	....	....	2	....	2
	2. Apoplexy	4	8	12	2	4	6	2	3	5	....	....	....	13	15	28
	3. Paralysis	15	13	28	6	4	10	....	....	....	1	2	3	22	19	41
	4. Insanity	....	....	....	....	....	....	....	....	....	1	1	2	1	1	2
	6. Epilepsy	2	2	4	1	....	1	....	....	....	....	....	....	3	2	5
	7. Convulsions	44	23	67	8	8	16	....	....	....	....	1	1	52	32	84
	8. Brain Disease (undistinguished)	7	....	7	4	2	6	....	....	....	1	1	2	12	3	16
	Order 2.															
	1. Pericarditis	....	....	....	1	....	1	....	....	....	....	....	....	1	....	1
	2. Aneurism	1	1	2	....	....	....	....	....	....	....	....	....	1	1	2
	8. Angina Pectoris	....	....	....	1	....	1	....	....	....	....	....	....	1	....	1
	Phlebitis	....	1	1	....	....	....	....	....	....	....	....	....	....	1	1
	Embolism	2	2	4	1	1	2	....	....	....	1	....	1	1	3	7
	Heart Disease (undistinguished)	5	27	32	10	12	22	2	1	3	3	3	6	40	43	83
	Order 3.															
	1. Laryngitis	2	2	4	1	1	2	....	....	....	....	....	....	3	3	6
	Laryngismus stridulus	....	1	1	....	....	....	....	....	....	....	....	....	....	1	1
	2. Bronchitis	55	85	140	11	14	25	....	....	....	4	3	7	71	103	174
	3. Pleurisy	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
	4. Pneumonia	21	23	44	8	5	13	....	1	1	....	1	1	32	29	61
	5. Asthma	2	2	4	2	1	3	....	....	....	....	....	....	4	3	7
	6. Congestion of Lungs	2	2	4	1	1	2	....	1	1	....	....	....	3	4	7
	Lung Disease (undistinguished)	3	1	4	1	....	1	....	....	....	2	....	2	6	1	7
	Order 4.															
	1. Stomatitis	....	....	....	....	1	1	....	....	....	....	....	....	....	1	1
	Pharyngitis	....	....	....	1	1	2	....	....	....	....	....	....	1	1	2
	Stricture of Oesophagus	....	....	....	1	....	1	....	....	....	....	....	....	1	1	2
	2. Gastritis	....	1	1	1	....	1	....	....	....	....	....	....	2	3	5
	Enteritis	1	3	4	1	2	3	....	....	....	....	....	....	5	5	10
	3. Peritonitis	4	....	4	1	2	3	1	....	1	....	....	....	3	6	9
	4. Ascites	2	4	6	....	1	1	....	....	....	....	....	....	1	5	6
	5. Perforation of Intestines	1	4	5	1	1	2	....	....	....	....	....	....	1	2	3
	6. Hernia	1	1	1	1	....	1	....	....	....	....	....	....	4	1	5
	11. Haematemesis	1	1	3	....	....	....	....	....	....	....	....	....	2	....	2
	Stomach Disease (undistinguished)	1	....	1	....	....	....	1	....	1	1	....	1	4	4	8
	13. Hepatitis	4	3	7	....	1	1	....	....	....	....	....	....	3	4	7
	14. Jaundice	2	2	4	....	2	2	1	....	1	1	....	1	1	....	1
	15. Liver Disease	....	3	3	1	1	2	....	....	....	....	....	....	3	4	7
	Cirrhosis	2	....	2	1	3	4	....	....	....	....	....	....	3	3	6
	Order 5.															
	1. Nephritis	....	....	2	1	....	1	....	....	....	1	....	1	4	....	4
	3. Bright's Disease (Nephria)	2	5	7	3	....	3	....	....	....	....	....	....	5	5	10
	4. Diabetes	2	1	3	....	....	....	....	....	....	....	....	....	2	1	3
	6. Cystitis	1	....	1	....	....	....	....	....	....	....	....	....	1	....	1
	7. Addison's Disease	....	....	....	....	1	1	....	....	....	....	....	....	....	1	1
	Kidney Disease (undistinguished)	2	....	2	....	1	1	....	....	....	....	....	....	2	1	3
	Order 6.															
	1. Ovarian Disease	....	1	1	....	....	....	....	....	....	....	....	....	....	1	1
	2. Uterine Disease	....	2	2	....	....	....	....	....	....	....	....	....	....	2	2
	Order 7.															
	2. Joint and Bone Disease	....	2	2	....	....	....	....	....	....	....	....	....	....	2	2
	Order 8.															
	1. Pyaemia	1	3	4	....	....	....	....	....	....	....	....	....	1	3	4
	2. Ulcer	....	....	1	....	....	....	....	....	....	....	....	....	1	....	1
	3. Skin Disease	....	1	1	....	....	....	....	....	....	....	....	....	....	1	1
IV.—	Order 1.															
	1. Premature Birth	23	18	41	10	5	15	....	....	....	1	....	1	34	23	57
	3. Spina Bifida	....	2	2	....	1	1	....	....	....	....	....	....	1	3	4
	Cleft Palate	....	1	1	....	....	....	....	....	....	....	....	....	....	1	1
	Hare Lip	....	....	....	....	1	1	....	....	....	....	....	....	....	1	1
	5. Teething	5	1	6	3	4	7	....	....	....	....	....	....	8	5	13
	Order 2.															
	2. Childbirth	....	....	3	....	6	6	....	....	....	....	....	....	....	9	9
	Puerperal Mania	....	2	2	....	....	....	....	....	....	....	....	....	....	2	2
	Puerperal convulsions	....	1	1	....	....	....	....	....	....	....	....	....	....	1	1
	Order 3.															
	1. Old Age	16	22	38	5	7	12	....	1	1	7	7	14	28	37	65
	Order 4.															
	1. Atrophy and Debility	33	36	69	12	11	23	....	....	....	8	11	19	53	58	111
V.—	Order 1. (Accident or Negligence)															
	1. Fractures and Contusions—Crushes	10	1	11	1	....	1	1	....	1	....	....	....	11	1	12
	" " Falls	20	2	22	....	....	....	....	....	....	....	....	....	27	2	29
	4. Burns and Scalds	....	2	2	1	....	1	....	....	....	....	....	....	1	2	3
	5. Poison	....	1	1	....	....	....	....	....	....	....	....	....	....	1	1
	6. Drowning	4	....	4	1	....	1	1	....	1	....	....	....	6	....	6
	7. Suffocation (found dead in bed)	....	8	8	....	....	....	....	....	....	....	....	....	3	8	6
	Order 4. (Suicide.)															
	2. Cut	1	....	1	....	....	....	....	....	....	....	....	....	1	....	1
	3. Poison	2	2	4	....	....	....	....	....	....	....	....	....	2	2	4
	5. Hanging	....	....	....	1	....	1	....	....	....	....	....	....	1	....	1
	Violent Deaths (not classed)	3	1	4	....	....	....	1	....	1	....	....	....	4	1	5
	Abscess Tumour	4	2	6	....	....	....	....	....	....	....	....	....	4	2	6
	Causes not specified or ill-defined	8	5	13	3	2	5	....	....	....	....	....	1	11	8	19

TABLE II.—Weekly Register of Deaths in the Borough of Birkenhead for the Year ending December 31st, 1878.

ARGYLE WARDS.

OXTON, EGERTON, CLIFTON, AND MERSEY WARDS.

Weeks 1	2	3	4	5	6	7	8	9	10	11	12	13	1st Qr.	14	15	16	17	18	19	20	21	22	23	24	25	26	2nd Qr.	27	28	29	30	31	32	33	34	35	36	37	38	39	3rd Qr.	40	41	42	43	44	45	46	47	48	49	50	51	52	4th Qr.	Year.
3	3	1	1	1	5	1	6	1	3	3	5	4	43	6	8	1	1	2	2	7	2	3	5	4	2	..	46	1	5	2	2	4	5	2	2	2	..	1	8	2	36	4	3	5	5	3	2	5	3	4	1	3	4	5	47	172
6	7	3	6	7	5	5	4	10	2	2	1	5	66	2	2	5	5	4	5	2	..	3	1	1	8	2	35	2	2	4	3	5	3	3	4	1	3	3	4	5	42	8	4	4	3	2	6	3	4	..	3	8	4	5	51	197

BEBINGTON WARD.

TABLE III.

WEEKLY CONDENSED REGISTER OF DEATHS AND METEOROLOGICAL RESULTS FOR 1878.

	CAUSES OF DEATH.	WEEKS. 1	2	3	4	5	6	7	8	9	10	11	12	13	1st Qr.	WEEKS. 14	15	16	17	18	19	20	21	22	23	24	25	26	2nd Qr.	WEEKS. 27	28	29	30	31	32	33	34	35	36	37	38	39	3rd Qr.	WEEKS. 40	41	42	43	44	45	46	47	48	49	50	51	52	4th Qr.	YEAR.
Borough of Birkenhead.	All Causes	32	31	37	34	37	47	34	30	40	36	33	39	45	475	38	35	25	25	27	25	36	21	21	17	25	20	24	339	21	28	37	33	30	29	33	28	25	25	24	36	29	378	45	29	41	43	32	30	33	30	36	30	33	34	48	464	1656
	Specified Causes	32	31	37	34	37	46	34	29	38	35	33	39	44	469	38	35	24	24	27	24	36	21	21	17	25	20	23	335	21	27	37	32	30	29	31	25	25	24	23	35	29	368	45	29	41	43	31	29	33	30	36	29	32	33	48	459	1631
	I.—Zymotic Diseases	6	7	4	12	12	9	11	10	15	9	6	6	15	122	7	4	5	8	8	5	6	5	4	5	4	6	8	75	5	6	6	14	13	5	6	9	10	7	5	9	3	98	4	2	6	9	3	3	6	6	13	9	10	8	9	88	383
	II.—Constitutional Diseases	6	3	4	4	5	5	1	3	3	5	3	5	12	59	6	9	5	6	5	5	6	6	2	1	4	3	2	60	5	4	3	1	2	7	7	3	1	4	3	7	5	52	6	7	5	7	6	6	5	6	7	2	7	3	4	71	242
	III.—Local Diseases	16	17	15	12	14	24	13	11	11	14	18	20	12	197	23	17	10	4	11	7	16	6	12	7	13	11	10	147	5	11	15	8	10	13	9	6	8	6	5	13	14	123	20	12	21	18	17	15	17	14	12	8	13	16	24	207	674
	IV.—Developmental Diseases	2	3	9	5	4	5	7	5	6	5	5	7	5	68	2	5	4	6	3	6	5	3	3	4	1	..	2	44	5	6	9	8	5	4	5	7	5	7	8	6	7	82	14	7	8	8	3	2	3	2	3	7	1	4	8	70	264
	V.—Violent Deaths	2	1	5	1	2	3	2	..	3	2	1	1	..	23	..	..	..	..	..	1	3	1	..	..	3	..	1	9	1	..	4	1	..	..	4	..	1	..	2	..	..	13	1	1	1	1	2	3	2	2	1	3	1	2	3	23	68
Cleveland, Claughton, Grange, and Argyle Wards.	All Causes	23	18	30	21	27	37	21	19	27	30	24	27	32	336	26	23	15	15	17	15	26	16	15	10	16	14	17	225	15	19	24	25	16	18	25	18	18	21	17	21	21	258	28	20	28	35	25	20	25	21	28	21	22	21	36	330	1149
	Specified Causes	23	18	30	21	27	36	21	19	27	29	24	27	31	333	26	23	14	14	17	14	26	16	15	10	16	14	16	221	15	18	24	24	16	18	24	15	18	20	16	21	21	250	28	20	28	35	24	19	25	21	28	20	21	21	36	327	1130
	I.—Zymotic Diseases	4	5	3	9	10	7	7	7	13	7	4	5	13	94	2	2	3	5	5	2	4	4	2	3	3	5	5	45	4	5	5	10	8	3	6	7	6	5	5	7	1	72	2	2	4	8	2	3	3	5	11	5	4	3	7	59	270
	II.—Constitutional Diseases	4	1	3	1	4	5	..	3	1	4	1	4	7	38	5	6	3	4	3	4	5	4	2	1	1	2	1	41	3	2	2	1	1	3	4	1	1	4	1	1	3	27	5	5	5	3	4	3	5	5	6	..	3	2	3	49	155
	III.—Local Diseases	11	8	12	7	10	18	6	8	8	11	14	14	8	135	17	12	6	3	8	6	10	5	9	4	10	7	9	106	4	9	8	5	5	9	7	3	5	4	3	10	12	84	14	10	13	15	13	10	13	8	10	8	12	12	18	156	481
	IV.—Developmental Diseases	2	3	8	3	1	3	6	1	2	5	4	4	3	45	2	3	2	2	1	1	4	2	2	2	..	..	..	21	4	2	5	7	2	3	3	4	5	7	6	3	5	56	7	2	5	8	3	..	2	1	1	4	1	2	5	41	163
	V.—Violent Deaths	2	1	4	1	2	3	2	..	3	2	1	..	..	21	..	..	..	..	..	1	3	1	..	..	2	..	1	8	..	..	4	1	..	..	4	..	1	..	1	..	..	11	..	1	1	1	2	3	2	2	..	3	1	2	3	21	61
Oxton, Egerton, Clifton, and Mersey Wards.	All Causes	9	10	4	10	8	10	9	10	11	5	5	9	9	109	8	10	9	6	6	7	9	2	6	6	5	5	2	81	3	7	6	5	9	8	5	6	3	3	4	12	7	78	12	7	9	8	5	8	8	7	4	4	11	8	10	101	369
	Specified Causes	9	10	4	10	8	10	9	9	9	5	5	9	9	106	8	10	9	6	6	7	9	2	6	6	5	5	2	81	3	7	6	5	9	8	5	6	3	3	4	11	7	77	12	7	9	8	5	8	8	7	4	4	11	7	10	100	364
	I.—Zymotic Diseases	2	2	..	2	2	2	3	3	2	1	1	1	1	22	4	1	2	3	..	2	2	..	2	1	..	..	2	19	1	1	.	3	3	2	..	2	3	1	..	1	2	19	2	..	..	1	1	..	3	1	1	3	6	3	2	23	83
	II.—Constitutional Diseases	2	..	1	1	1	..	..	..	1	1	1	1	3	12	..	2	2	1	2	1	1	1	..	..	1	1	..	12	1	2	..	..	1	2	2	1	..	..	1	6	2	18	1	1	..	4	2	2	..	1	1	1	4	..	1	18	60
	III.—Local Diseases	5	8	2	5	3	6	5	3	2	3	3	6	3	54	4	5	3	..	3	..	5	..	3	3	2	4	..	32	..	1	5	2	3	4	2	1	..	..	2	2	2	26	4	2	7	3	2	4	4	5	1	..	1	3	4	40	152
	IV.—Developmental Diseases	..	..	..	2	2	2	1	3	4	..	..	..	2	16	..	2	2	2	1	4	1	1	1	2	1	..	..	17	..	3	1	..	2	..	1	2	..	..	1	2	1	13	5	4	2	..	..	2	1	..	1	..	..	1	3	19	65
	V.—Violent Deaths	..	..	1	..	..	..	..	..	..	..	..	1	..	2	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	4
Bebington Ward.	All Causes	..	1	1	1	..	..	..	..	1	..	..	..	1	5	..	1	1	..	1	1	.	1	..	..	..	..	..	5	..	1	1	..	..	..	..	1	2	..	1	..	..	6	2	..	1	..	1	2	..	..	2	..	..	2	1	11	27
	Specified Causes	..	1	1	1	..	..	..	..	1	..	..	..	1	5	..	1	1	..	1	1	..	1	..	..	..	..	..	5	..	1	1	..	..	..	..	1	2	..	1	..	..	6	2	..	1	..	1	2	..	..	2	..	..	2	1	11	27
	I.—Zymotic Diseases	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	6
	II.—Constitutional Diseases	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	3
	III.—Local Diseases	..	..	..	..	..	..	..	..	1	..	..	..	1	2	..	..	1	..	..	1	..	1	..	..	..	..	..	3	..	..	..	..	..	..	..	1	1	..	..	..	..	2	1	..	..	..	1	1	..	..	1	..	..	1	1	6	13
	IV.—Developmental Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	2
	V.—Violent Deaths	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	2	3
Union Hospital.	All Causes	..	2	2	2	2	..	4	1	1	1	4	3	3	25	4	1	..	4	3	2	1	2	..	1	4	1	5	28	3	1	6	3	5	3	3	3	2	1	2	3	1	36	3	2	3	..	1	..	..	2	2	5	..	3	1	22	111
	Specified Causes	..	2	2	2	2	..	4	1	1	1	4	3	3	25	4	1	..	4	3	2	1	2	..	1	4	1	5	28	3	1	6	3	5	3	2	3	2	1	2	3	1	35	3	2	3	..	1	..	..	2	2	5	..	3	1	22	110
	I.—Zymotic Diseases	..	..	..	..	..	..	1	..	..	1	1	..	1	4	1	..	..	..	2	1	..	1	..	..	1	1	1	9	..	..	1	1	2	..	..	..	..	1	..	1	..	6	..	..	1	..	..	..	..	1	1	..	2	..	5	24
	II.—Constitutional Diseases	..	1	..	2	..	..	1	..	1	..	1	..	2	8	1	1	..	1	..	..	..	1	..	..	2	..	1	7	1	..	..	..	..	..	2	1	1	..	..	1	..	6	..	1	..	..	..	..	..	..	1	..	1	..	3	24
	III.—Local Diseases	..	1	1	..	1	..	2	..	..	..	1	..	..	6	2	..	..	1	..	..	1	..	..	..	..	..	1	6	1	1	2	1	2	..	..	1	2	..	..	1	..	11	1	..	1	..	1	..	..	..	..	..	..	1	5	28
	IV.—Developmental Diseases	..	..	1	..	1	..	..	1	..	..	1	3	..	7	..	..	..	2	1	1	..	..	..	..	..	..	2	6	1	..	3	1	1	1	1	1	..	..	1	1	1	12	2	1	1	..	..	..	..	..	..	..	..	..	9	34
	V.—Violent Deaths	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Meteorological Results.	Percentage of time Wind blew from S., S.W., W., and N.W.	77·9	64·8	86·3	91·6	57·1	52·9	29·7	79·7	95·2	88·0	51·7	88·6	42·8	69·7	85·1	0.5	55·3	5·3	47·6	17·2	66·6	55·3	81.5	18.5	36·3	51·1	77·9	27·9	46·7	66·0	100·0	96·4	52·3	20.2	36·3	88·6	24·4	68·4	73·8	91·6	96·4	89·2	69·5	32·1	58·3	8.9	80·9	53·5	58·9	69·6	27·9	89·8	39·8	49·2	58·7
	Mean Hourly horizontal motion of the Air in Miles	13·7	15·9	23·1	30·6	11·4	6·5	13·8	13·9	19·3	26·7	11·7	17·1	15·9	16·8	16·1	19·4	10.3	15·5	12·0	17·9	18·2	7·8	9·8	13·8	6·3	6.6	13·2	12·4	15·7	11·0	10·6	8.4	12·4	15·8	23·4	11·4	9·5	10·2	25·8	13·4	13.0	12·4	21·8	12·4	16·5	17·5	14·6	21·5	10·4	32·7	11.2	8·6	12·9	11·6	13·8	14·2
	Average percentage of Cloud to Clear Sky	70·0	52·8	88·5	81·4	67·1	70·0	85·7	77·1	87·1	87·1	67·1	80·0	48·5	74·0	60·0	61·4	84·2	41·4	77·1	61·4	62·8	77·1	41·4	72·8	80·0	72.8	38·5	63·9	68·5	82·8	67·1	55·7	31·4	78·5	62·8	65·7	57·1	77·1	64·2	75·7	64.9	85·7	75·7	74·2	75·7	51·4	52·8	68 5	87·1	72·8	68·5	72·8	60·0	70·2	68·2
	Rainfall in Inches	1·325	·338	·327	·565	·775	·014	276	·048	·705	·242	·168	·099	·571	5·543	·092	·202	·730	·074	·271	1·359	1·326	·856	·325	1·351	1·553	·052	·005	8·196	·000	·066	·010	·999	·166	1·552	·152	·532	·848	·000	·185	1·297	2·250	8·057	·892	·760	·181	·454	·575	·700	·570	·000	·263	·258	·221	·621	·637	6·132	27·928
	Rainfall as to Hours	24·3	6·0	10·2	14·4	18·1	·3	5·9	1·9	17·6	8·5	5.3	1·3	8·2	122·0	2·2	6.1	21·2	1.1	9·2	23·0	17·3	13·5	5·1	15·6	23·4	3·2	1.0	141·9	0·0	0·3	0·3	7·9	4·2	20·4	23·8	10·2	10·5	0·0	2.4	16·1	28·1	124·2	12·6	14·8	5·3	13·0	11·1	12·4	13·1	0·0	12·5	4·5	3·6	19·7	14·7	137·3	525·4
	Thermometer Means	44·5	38·4	45·6	40·9	37·2	36·9	41·8	46·8	48·3	45·7	42·2	43·6	37·2	42·2	40·9	49·3	52·4	50·4	53·8	54·0	57·1	48·7	50·8	53·7	54·4	58·0	67·8	53·7	60·4	58·4	63·9	64·2	7·9	63·2	61.1	60·1	60·6	61·9	58·5	54·7	54·0	60·2	54·3	54·9	51·5	48.4	43·4	42·7	41·7	36·8	37 6	29·1	33·2	31·3	41·7	49·4
	Mean of Evaporation	43·1	36·7	43·9	39·7	35·5	35·3	40·0	43·5	45·7	43·1	39·0	40·9	34·4	40·0	38·1	44·2	48·1	46·6	50·1	51·1	54·3	48·7	50·8	53·7	51·4	54·7	54·7	50·4	56·7	55·8	61·5	60·8	58·8	62·0	58·1	57·4	58·2	58·3	54·8	50·2	51·7	57·1	52·5	52·9	49·3	46·1	40·9	40·5	39·7	35·9	36·2	28·2	32·0	30·5	40·0	46·8
	Barometer Means, reduced to Sea Level and to 32° Fahrenheit	30·048	30·184	30·338	29·752	30·242	30·509	29·663	30·278	29·878	30·149	30·357	30·257	29·686	30·126	29·537	30·024	29·724	29·873	29·859	29·753	29·535	29·630	29·929	29·935	29·638	29·965	30·046	29·804	29·962	29·965	30.250	29·877	30 124	29.811	29·529	29·845	29·543	30·096	30·099	29·766	29·763	29·894	30·025	29·508	29·981	29·274	29·843	29·858	29·441	30·120	29·660	30·045	29·732	29·459	29·739	29·745	29·891

The Meteorological Results are for the 52 weeks ending December 28th, 1878.

TABLE IV.

STREET REGISTER OF DEATHS.

A.—Cleveland, Claughton, Grange and Argyle Wards.

Streets.	Total from all Causes.	From Zymotic Diseases only.	Streets.	Total from all Causes.	From Zymotic Diseases only.
Abbey Street	8	4	Cambridge Place..	2	2
Abbot Street	7	0	Denbigh Street ...	4	0
Albion Street.....	6	1	Ruthin Street ...	2	1
Albert Terrace ...	1	0	Wrexham Street...	1	0
Albion Terrace ...	1	1	*Borough Hospital* ...	43	1
Castle Buildings...	3	0	Borough Road	8	0
Hamilton Terrace	2	0	Brandon Street	2	1
WilbrahamTerrace	2	1	Brassey Street	2	0
Alfred Dock	2	0	Bridge Street.....	5	1
Alfred Road	2	1	Bridge End Terrace	2	2
Alma Street	1	0	Bright Street	3	1
Argyle Street.....	4	0	Brook Place	2	0
Arthur Street.....	4	1	Brook Street	41	11
Ashfield	1	0	Ivy Bank	2	0
Athol Street	1	1	Ross Terrace	1	1
Austin Street.....	2	1	Brougham Street ...	3	2
Back Beckwith Street	8	2	Camperdown Street	1	0
Back Havelock Street	2	1	Canning Street.....	2	0
Back Myrtle Street..	1	1	Cannon Hill	1	0
Back Oliver Street...	4	3	Cardigan Street.....	4	0
Back Price Street ...	2	1	Cathcart Street	10	3
Back St. Anne Street	3	0	Cavendish Road.....	1	0
St. Anne's Terrace	1	1	Charlesville	2	1
Barnard Road	1	0	Chapel Street.....	7	0
Barton Street.....	2	0	Chester Street	16	2
Beckwith Street.....	23	6	Carpenter Row ...	2	1
Byrom Place	1	0	Chester Place.....	1	0
Bedford Street	2	1	Eton Place.....	1	0
Bentinck Street	6	1	Mersey Place.....	2	1
Berner Street.....	1	0	Windsor Place ...	4	2
Bertha street	3	1	Christchurch Road...	1	0
Birkenhead.....	5	0	Church Street	9	0
Blackpool Street ...	1	1	Clarendon Street ...	6	1

TABLE IV.—*Continued.*

Streets.	Total from all Causes.	From Zymotic Diseases only.	Streets.	Total from all Causes.	From Zymotic Diseases only.
Claughton	1	0	Elizabeth Street	2	0
Claughton Firs	2	0	Euston Grove	3	0
Claughton Road	19	4	Exmouth Street	7	2
Claughton Village	1	0	Falcon Grove	2	0
Clayton Street	1	0	*Fever Hospital*	5	5
Cleveland Street	21	3	Field Street	17	6
Cleveland Avenue	6	5	Flamank Street	6	1
Russell Place	4	0	Flaybrick Hill	1	0
Clifton Road	8	0	Fore Street	4	0
Collingwood Street	2	0	Frederick Street	7	5
Conway Street	13	3	George Street	9	0
Kent Place	1	0	Gillbrook	2	0
Vernon Place	1	0	Gladstone Street	4	0
Corporation Road	3	3	Glover Street	3	1
Cottage Street	1	0	Grace Street	1	1
Cromwell Street	0	0	Grange Lane	9	3
Taylor's Buildings	2	1	Grange Mount	2	0
Cross Street	1	0	Grange Road	6	1
Crown Street	3	1	Grange Street	2	0
Dacre Street	2	0	*Great Float*	1	0
Dale Street	2	0	Greenfield Street	3	1
Davies Street	2	1	Halkin Street	3	0
Derby Street	1	1	Hamilton Lane	0	0
Devonshire Road	2	0	Hamilton View	2	0
Dock Cottages	23	7	Hamilton Square	3	0
Dock Extension Railway	1	0	Hamilton Street	2	0
Duke Street	2	0	Hampton Street	1	0
Edgar Street	5	1	Havelock Street	4	2
Egerton Street	10	0	Hemingford Street	1	0
Connor's Court	3	0	Henry Street	5	1
Godfrey's Terrace	7	3	Herbert Place	1	0
Harper's Court	1	0	Hilton Street	4	2
Pover's Court	1	0	Hind Street	1	0
Eldon Place	12	7	Hope Street	3	1
Eldon Street	2	1	Howard Street	11	4
Elgin Street	5	1	Huskisson Street	1	0
Shaw's Terrace	1	1	Ivy Street	5	2
Elizabeth Place	2	0	Jackson Street	6	2
			Kendal Street	2	1

TABLE IV.—*Continued.*

Streets.	Total from all Causes.	From Zymotic Diseases only.	Streets.	Total from all Causes.	From Zymotic Diseases only.
King Street	2	0	Oxton Road	17	0
Kinmel Street	4	0	Oak Bank	2	0
Laird Street	10	2	Palm Grove	3	0
Lansdowne Road ...	2	0	Park Road East.....	2	0
Leicester Street.....	7	0	Park Road South ...	1	0
Leicester Terrace.....	1	0	Park Street	8	2
Livingstone Street...	2	0	Parkfield	5	0
Lord Street	8	1	Hemingford Lodge	12	1
Lorne Street	1	0	Parkfield Avenue..	2	2
Lowe Street	1	1	Patten Street.....	1	1
Lowther Street	4	3	Peel Street	4	1
Maddock Street.....	1	0	Pilgrim Street	2	0
Manor Farm	2	1	Pleasant Street	4	1
Manor Hill.....	1	0	Pool Street.....	2	1
Market Place South..	3	1	Price Street	31	6
Market Street.....	16	4	Prince's Terrace.....	1	0
Marshall Street	3	0	Priory Street	3	1
Meacock Street	2	0	Pym Street.....	1	1
Meadow Street	1	0	Quarry Bank Place ..	3	2
Midland Street	5	1	Queen Street	3	0
Milton Street.....	2	0	Queensbury Street...	8	1
Monk Street	1	0	Rhyl Street	4	2
Moon Street	4	0	Ridley Street.....	2	0
Mornington Street...	8	1	*River Mersey*	6	0
Morpeth Dock.....	3	0	Roberts Street	2	2
Myrtle Street.....	2	1	Rose Brae	1	0
Napier Street.....	1	0	Rose Street	1	1
Nelson Street.....	3	0	Russell Street	1	0
Neptune Street	1	0	St. Aidan's College..	1	0
Norman Lodge	1	0	St. Anne Street.....	29	10
Oak Street	12	3	St. John Street.....	0	0
Old Bidston Road ...	8	3	St. John's Place...	2	1
Cumberland Place	6	2	St. Mary's Avenue...	3	0
Old Chester Road ...	7	2	St. Mary's Gate.....	5	2
Matthew's Court ..	4	0	Hughes Buildings	1	0
Old Priory	2	1	Scott's Place	1	0
Oliver Place	3	1	Slatey Road	2	1
Oliver Street	21	2	Somerville Street ...	3	2
Miller's Place ...	1	0	Stanley Road.....	0	0

TABLE IV.—*Continued.*

Streets.	Total from all Causes.	From Zymotic Diseases only.	Streets.	Total from all Causes.	From Zymotic Diseases only.
Stanley Court ...	2	0	Walton Street	8	4
Stewart Street	2	2	Warwick Street.....	12	4
Sun Street.....	10	2	Waterloo Place	1	0
Sussex Street.....	2	1	Watson Street	15	1
Taylor Street.....	3	2	Byrom Street.....	8	2
Tetbury Street	0	0	Oakfield View ...	1	0
Richmond Cottages	2	0	Orderly Avenue...	2	1
Thomas Street	21	11	Orderly Home ...	1	1
Tranmere Vale	7	0	Orderly Residence	2	1
Tranmere Vale Terrace	1	0	Wesley Street	2	1
Upper Beckwith Street.....	1	1	Westbourne Road...	6	0
Eagle Court	1	0	White Street	2	0
Upton Road	1	0	Wilbraham Street ...	6	2
Vicker Street.....	3	0	Wilkinson Street ...	3	0
Victoria Wharf	1	0	Willaston Place.....	3	1
Vincent Street	1	0	William Street	5	2
Vine Street	9	3	Wilson Street	7	5
Vittoria Street	1	0	Wilton Street.....	3	0
Vulcan Street	6	2	Windsor Street	1	0
			Wood Street	3	0
			Morpeth Buildings	8	2

B.—Oxton, Egerton, Clifton, and Mersey Wards.

Streets	Total from all Causes.	From Zymotic Diseases only.	Streets.	Total from all Causes	From Zymotic Diseases only.
Albert Place	4	0	Beech Road	1	0
Apple Grove	1	1	Bennett's Hill	1	0
Back Portland Street	3	1	Birkenhead Buildings	1	0
Barton Buildings ...	1	0	Birkenhead School ..	1	0
Beaconsfield Road...	3	0	Bold Street.....	2	0
Bedford Place	3	0	Booth Street	3	0
Bedford Road	9	2			

TABLE IV.—*Continued.*

Streets.	Total from all Causes.	From Zymotic Diseases only.	Streets.	Total from all Causes.	From Zymotic Diseases only.
Borough Road	3	0	Heathley House.....	1	0
Brougham Street ...	8	1	Helmingham Road...	3	1
Brunswick Street ...	2	1	Holm Lane, Oxton...	3	2
Bulwer Street	1	0	Holt Hill	6	3
Carlyle Street	3	0	Holt Road	4	1
Cavendish Park.....	1	1	Hope Terrace.....	1	0
Cearns Road, Oxton	1	0	Hughes Lane, Oxton	2	0
Chapel Street.....	2	1	Kellett's Yard	2	2
Chesnut Grove	1	0	Kingsdown Street ...	1	0
Church Road.....	3	0	Kingsland Road.....	1	0
Church Terrace.....	5	0	Kingston Terrace ...	1	1
Clarendon Street ...	5	2	Laurel Road	1	1
Claughton Firs, Oxton	3	2	Lees Place.....	1	0
Clifton Road	1	0	Lilley Street	3	1
Clyde Street	2	0	Lingdale Firs	1	0
Cobden Street	2	0	Lingdale, Oxton.....	1	0
Combermere Terrace	2	1	Liverpool Buildings	3	0
Comet Street	2	0	Lorne Road, Oxton	2	0
Convent, Highfield Road	1	0	Lowwood Road	1	0
Dee Street.....	2	0	Marsden Villas	2	1
Derby Street	1	1	Matthews Place.....	1	1
Dingle Road	6	4	Meadow Lane.....	6	1
Duke Street	6	2	Medway Road	1	0
Ebenezer Street.....	2	0	Meteor Street	3	2
Egerton Park.....	1	1	Mill Hill.....	1	1
Elm Grove.....	3	0	Mill Street.....	1	0
Fountain Street.....	4	0	Milton Road	2	1
Frodsham Street ...	3	1	Milton Street.....	2	0
Grange Vale	2	1	Moon Street	3	1
Green Lane	1	0	Moss Grove	1	0
Greenway Road.....	1	0	Newburn's Cottages, Oxton	2	0
Grosvenor Street ...	6	1	Newburn's Lane, Oxton	1	0
Grove Road	3	2	New Chester Road...	3	1
Hampden Street.....	4	0	Oaktree Place.....	7	1
Harland Street	1	0	Oaktree Terrace.....	1	1
Heathfield, Oxton ...	1	0	Old Chester Road ...	16	5
Heathfield Road ...	1	0	Olive Crescent	2	0

TABLE IV.—*Continued.*

Streets.	Total from all Causes.	From Zymotic Diseases only.	Streets.	Total from all Causes.	From Zymotic Diseases only.
Olive Mount	1	0	Sidney Buildings ...	1	0
Oxton Common, Oxton	1	0	Sidney Road	1	0
Oxton Village, Oxton	2	0	*Steamer* on Tranmere beach	1	0
Peel Street.....	4	1	Storeton Road, Oxton	1	0
Pitt Street	7	4	Starr Street	2	0
Planet Street	1	1	Stuart's Delf	2	0
Pleasant Street	1	0	Stuart's Road	3	3
Poplar Road, Oxton	3	0	Swan's Court.....	1	0
Prenton Lane, Oxton	1	0	Tanyard Cottage ...	1	0
Price's Lane, Oxton	1	0	Taylor's Delf	1	0
Prince's Place.....	4	0	Temple Road.....	1	1
Quarry Bank	1	0	Thomas Court	2	0
Queen Street	1	0	Thompson Street ...	3	0
Queen's Buildings...	8	2	Tower Hill.....	4	1
Queen's Court	1	0	Union Street	2	0
Queen's Place	8	2	Victoria Road	5	0
Railway Terrace.....	2	0	Village Road, Oxton	1	0
Rhoden's Place	1	0	Village Terrace	2	0
River Mersey, off Tranmere	1	0	Warrington Street...	2	0
Rocky Bank Road...	1	0	Well Cottage, Oxton	1	0
Rodney Street	7	3	Well Lane	3	0
Rose Cottages	1	0	Wellington Street ...	5	1
Rose Mount, Oxton	1	0	Wesley Street	3	1
Rose Place.....	5	3	Westbury Street ...	2	0
Russell Road	4	0	Whetstone Lane ...	5	1
St. Paul's Place.....	1	0	Willey Street.....	1	1
St. Paul's Road.....	11	2	Woodchurch Lane...	1	1
St. Paul's Vicarage..	1	1	Woodchurch Road...	1	0
Salisbury Road	1	0	Woodchurch Road, Oxton	1	0
Seymour Street.....	3	0	The Woodlands.....	1	0
Shrewsbury Road, Oxton.....	1	0	Wye Street	1	0

TABLE IV.—*Continued.*

C.—Bebington Ward.

Streets.	Total from all Causes.	From Zymotic Diseases only.	Streets	Total from all Causes.	From Zymotic Diseases only.
Acton Road	1	1	*River Mersey*	2	0
Bebington	1	0	Rock Lane.....	1	0
Dacre Hill	3	2	Rock Park.....	4	0
The Dell.....	1	1	*Ship* "Akbar"	1	0
Derby House.....	1	0	*Ship* "Conway" ...	1	0
Derby Park	1	0	*Ship* "Indefatigable"	1	0
Highfield	4	1	Victoria Road	2	1
Lorne Terrace	1	0	Woodland Grove ...	1	0
Manor House.....	1	0			

SUPPLEMENT TO TABLE IV.

RETURN of DEATHS in Birkenhead Union Hospital and Workhouse Registered during 1878.

Date.	Sex.	Age.	Occupation, &c.	Cause of Death.	Approximate Date and Address of Deceased when admitted.
Jan.					
8	M.	39	Labourer	Morbus cordis	Nov., '77—Field-street.
6	F.	23	Charwoman.....	Tuberculosis	Jan., '78—William-street.
15	F.	73	Labourer's widow..	Senility	Jan., '77—Eldon-place.
18	M.	58	Labourer	General paresis....	May, '74—Meacock-street.
23	M.	59	do.	Phthisis	Jan., '78—St. Ann-street,
24	M.	43	do.	Carcinoma splenitis	Dec. '77—Queensbury-st.
29	M.	73	Tailor	Bronchitis (inq.) ..	Jan., '78--Egerton-street.
Feb.					
1	F.	67	Labourer's widow.	Old age	May, '74—Wilson-street.
10	M.	34	Labourer	Bronchitis	Jan. '78—Tranmere.
10	M.	78	do.	Senile Œdema ..	July, '72—St. Ann-street.
11	M.	68	do.	Typhoid fever	Feb., '78—Chester-street.
17	M.	42	Porter	Morbus cordis	Feb., '78—Meacock-street.
22	M.	77	Labourer	Old age	Nov., '75—Cathcart-street.
Mar.					
1	M.	30	do.	Phthisis	Nov., '77—Tranmere.
5	M.	31	Carter	Typhus	Feb., '78—Brook-street.
12	M.	19	Labourer	do.	May,'78–Higher Bebington
12	F.	7 m.	Shoemaker's d'gtr.	Marasmus	Dec.,'77—Beckwith-street.
14	M.	79	Labourer	Senile gangrene ..	Aug., '77—Egerton-street.
14	F.	48	Custom-house officer's wife	Acute mania	Dec., '77—Tranmere.
18	M.	1 hr.	Servant's son	Premature birth ..	Mar., '78—Tranmere.
19	M.	50	Labourer	General debility ..	Jan., '78—Field-street.
25	F.	64	Labourer's widow.	do. ..	May, '78—Queensbury-st.
28	F.	38	Coachman's widow	Phthisis	Feb., '78—Brassey-street.
30	M.	16	Labourer	Fever	Mar.,'78—Godfrey's-court.
31	F.	42	Cook	Phthisis	do. —Chapel-street.
Apl.					
2	M.	3	Tinman's son	Measles	do. address unknown.
7	M.	33	Labourer	Ulcer, Phthisis....	Nov., '77—Seacombe.
7	M.	63	do.	Pulmonary disease .	Apl., '78—Back Price-st.
7	F.	57	Charwoman.....	Bronchitis	do. —Egerton-street.
13	F.	75	Nurse	Carcinoma.....	Jan., '75—Liscard.
20	M.	1	Servant's son	Marasmus	May., '78—Knox-street.
24	M.	1	Charwoman's son .	Struma	Aug. '77—Egerton-street.
26	F.	7	Unknown	Cerebral softening, Convulsons	Apl.'78—address unknown.
28	M.	¾	Charwoman's son .	Marasmus	Nov., '77—Egerton-street.
May					
1	F.	7 m.	Weaver's daughter	Measles	Sep.,'77—born in w'khouse.
4	M.	11 m.	Unknown	do.	July,'77—Hamilton-square
5	M.	57	Labourer	Senile decay	July, '76—Field-street.
11	F.	½	Servant's daughter	Marasmus	May, '78—Flamank-street.
12	F.	25	Labourer's wife ..	Fever	do. —Eldon-place.
16	F.	67	do.	Dilatation of cardc valves, old age....	Apl., '78—Tranmere.
23	M.	1	Labourer's son ..	Scarlatina, enlarged glands	do. —Tranmere-vale, Boro'-road.

SUPPLEMENT TO TABLE IV.—*continued.*

Date.	Sex.	Age.	Occupation, &c.	Cause of Death.	Approximate Date and Address of Deceased when admitted.
May 27	F.	3	Unknown	Cervical abscess ..	Apl., '78—Mornington-st.
June 7	M.	58	Labourer	Senile decay, diarrhœa	Nov., '77—St. Ann-street.
10	M.	2	Labourer's son ..	Cancrum oris	June,'78—Godfrey's-court.
12	M.	26	Labourer	Bronchitis	Feb., '78—Leicester-street.
13	M.	35	do.	Phthisis	Mar., '78—Ruabon-street.
15	M.	38	do.	Delirium tremens..	June,'78—Pover's-court.
18	F.	59	Labourer's widow.	Senile decay, diarrhœa	do. —Watson-street.
25	M.	33	Labourer	Ulcer, pulmonary disease	do. —Frederick-st.
26	F.	75	Labourer's widow.	Senility	July, '74—Field-street.
26	F.	32	Dressmaker.....	Pulmonary consumption	May, '78—Watson-street.
26	M.	22	Labourer	Typhoid fever	do. —Price-street.
26	F.	89	Unknown.....	Old age	July, '77—Camden-street.
July 4	F.	62	Stonemason's widow.	Senile paralysis ..	Dec., '75—Tranmere.
4	M.	33	Labourer	Phthisis	May, '78— do.
6	M.	3 m.	Domestic servant's son	Marasmus	June,'78— do.
10	F.	5	Blacksmith's daughter	Pneumonia	July, '78—Brougham-st.
11	F.	40	Labourer's wife ..	Typhus fever.....	do. —Egerton-street.
15	M.	5 m.	Carter's son.....	Marasmus	Feb., '78—Tranmere.
17	M.	71	Labourer	Senility	May, '73—Havelock-st.
18	M.	11	Labourer's son ..	Nephritis	July, '78—address unk'wn.
20	F.	3 m.	Unknown.....	Convulsions	April, '78—Tranmere.
20	M.	82	Joiner	Senile decay	July, '78—Cleveland-st.
25	M.	56	Labourer	Morbus cordis	do. —Byrom-street.
25	F.	3wks.	Labourer's daughter.	Marasmus	do. —Liscard.
25	F.	29	do.	Typhus fever.....	do. —Howard-street.
27	F.	75	Gardener's wife ..	Senile paralysis ..	Nov., '77—Tranmere.
27	M.	13	Ostler's son.....	Rheumatism tetanus	July, '78—Union schools.
30	M.	51	Seaman	Delirium tremens..	do. —Conway-street.
Aug. 1	M.	73	Police-constable..	Senile decay	do. —Tranmere.
1	F.	51	Brewer's widow ..	Cardiac disease....	do. do.
5	F.	64	Labourer's widow.	Senile decay	May, '77—Egerton-street.
6	F.	44	Sawyer's wife	Tuberculosis	June, '77—Chester-street.
7	M.	5	Engine-fitter's son.	Phthisis	Jan., '78—Price-street.
10	M.	½	Charwoman's son .	Marasmus	May, '78—Davies-street.
14	M.	31	Tailor	Phthisis laryngea..	July, '78—Leicester-street.
18	F.	75dys	Servant's daughter	Mesenteric disease .	June, '78—Tranmere.
20	F.	13m.	Unknown.....	Marasmus	July, '78—Oak-street.
24	F.	25	Cab-driver's wife..	Phthisis	do. —Bk. Beckwith-st.
25	M.	70	Labourer	Senile bronchitis ..	Jan., '78—St. Ann-st.
30	F.	60	Shipkeeper's widow	Cardiac dropsy	July., '78—Seacombe.
Sept. 1	F.	40	Charwoman.....	Chronic bronchitis .	Aug., '78—Walton-street.
2	M.	65	Stonemason	Typhus fever.....	July, '78—Wood-street.
9	F.	19	Servant	Phthisis pulmonalis..	do. —Bk. Beckwith-st.
11	F.	66	Joiner's wife	Senile decay	June, '78—Waterloo-place.
14	M.	½	Domestic servant's son	Marasmus	May, '78—Taylor-street.

SUPPLEMENT TO TABLE IV.—*continued.*

Date.	Sex.	Age.	Occupation, &c.	Cause of Death.	Approximate Date and Address of Deceased when admitted.
Sept.					
16	M.	2 m.	Domestic servant's son	Jaundice	July, '78—Brook-street.
19	F.	49	Labourer's widow .	Typhus fever.....	Sept. '78—Godfrey's-court.
24	M.	1	Domestic servant's son	Marasmus	do. —Wilson-street.
Oct.					
1	M.	45	Seaman	Cerebral disease ..	do. —Bentinck-street.
3	F.	14m.	Unknown.....	Marasmus	Aug., '78—Thomas-street.
3	F.	3m.	Domestic servant's daughter	do.	do. do.
6	F.	4m.	Charwoman's daughter	do.	do. —Egerton-st.
12	M.	39	Labourer	Gangrene	Sept., '73—Market-courts.
16	F.	2m.	Domestic servant's daughter	Marasmus	Aug., '78—Walton-street.
18	F.	15	Labourer's daughter	Typhus	Oct., '78—Godfrey's-court.
19	M.	61	Labourer	Senile decay, mania	May, '75—Seacombe.
30	M.	33	do.	Cardiac disease Embolism	Aug., '78—St. Ann-street.
Nov.					
18	F.	8m.	Carter's daughter .	Marasmus	Feb., '78—Tranmere.
19	M.	50	Labourer	Cardiac disease, Hæmatemesis ..	Nov., '78—Oak-street.
28	F.	55	Coachbuilder's widow	Dysenteric diarrhœa	do. —Thomas-street.
29	M.	73	Boilermaker	Senility	Sept., '78—Egerton-street.
Dec.					
4	M.	78	Labourer	Senile decay	do. —Tranmere.
4	M.	72	Landscape painter.	Hepatic disease....	Nov., '78—Egremont.
7	F.	67	Seaman's widow..	Dysenteric diarrhœa	March, '78—Liscard.
8	F.	60	do. ..	Senile decay	Nov., '78—Orderly-place.
8	F.	64	Labourer's widow .	General debility ..	June, '78—Tranmere.
17	F.	35	Domestic servant .	Typhoid fever	Dec., '78—William-street.
20	F.	42	Labourer's wife ..	Fever	do. —Denbigh-street.
22	M.	63	Engine-fitter	Dropsy, convulsions	do. —Leicester-street.
24	F.	62	Wheelwright's widow	Senile bronchitis ..	April, '78—Market-street.

TABLE V.

Lunar Monthly Table of Deaths from all Causes and Zymotic Diseases, with the Rates per 1,000 per Annum.

1878.	No. of Deaths from all Causes.	Annual Rate per 1,000 Living.	No. of Deaths from Zymotic Diseases.	Annual Rate per 1,000 Living.
1st Month ending Jan. 28th...	134	20.86	29	4.51
2nd ,, ,, Feb. 25th...	148	23.04	42	6.54
3rd ,, ,, March 25th.	148	23.04	36	5.60
4th ,, ,, April 22nd..	143	22.26	31	4.82
5th ,, ,, May 20th...	113	17.59	27	4.20
6th ,, ,, June 17th...	84	13.08	18	2.80
7th ,, ,, July 15th...	93	14-48	25	3.89
8th ,, ,, Aug. 12th...	129	20.08	38	5.91
9th ,, ,, Sept. 9th....	111	17.28	32	4.98
10th ,, ,, Oct. 7th.....	134	20.86	21	3.27
11th ,, ,, Nov. 4th....	145	22.57	20	3.11
12th ,, ,, Dec. 2nd....	129	20.08	28	4.35
13th ,, (+ 1 day) ending December 31st	145	22.57	36	5.60
Year	1656	19.83	383	4.58

TABLE VI.

Description of those who Died during 1878.

Occupation, &c.	M	F	Son.	Daughter.	Wife.	Widow.
Accountant	2	...	...	4	2	...
Agent	1	...	2	3	1	1
Annuitant	...	4	...	...	...	...
Architect	1	...	...	1	...	3
Armourer	...	...	1	...	...	...
Army officer	1	...	...	1	...	...
Artist	...	...	...	...	...	1
Baker	2	...	5	3	...	1
Barm dealer	...	...	...	...	...	1
Barman	...	...	1	...	...	...
Billiard marker	1	...	...	...	...	...
Blacksmith	8	...	7	7	2	...
Boat builder	...	...	1	...	...	...
Boilermaker	6	...	15	19	7	1
Bookbinder	1	...	...	...	...	...
Bookkeeper	11	...	7	8	3	4
Bookseller	...	...	1	2	...	...
Brassfounder	1	...	...	...	1	...
Brassmoulder	...	...	1	...	...	...
Brewer	1	...	...	...	...	1
Bricklayer	8	...	1	5	2	...
Brickmaker	3	...	2	...	...	1
Broker	4	...	2	4	1	...
Builder	2	...	1	1	1	1
Butcher	3	...	7	6	1	1
Cabinet maker	2	...	1	2	...	...
Car driver	2	...	2	1	2	...
Car proprietor	...	...	...	...	1	1
Carpet dealer	...	...	...	...	1	...
Cart owner	1	...	...	1	1	...
Carter	6	...	7	14	3	1
Cashier	1	...	3	...	2	...
Cattle dealer	...	...	...	1	...	...
Charwoman	...	4	4	5	...	...
Chemist	...	...	1	1	1	2

TABLE VI.—*Continued.*

Occupation, &c.	M	F	Son.	Daughter.	Wife.	Widow.
Chimney sweep	...	...	...	1	...	...
Civil engineer	...	...	...	...	..	1
Clergyman	...	..	4	1	...	...
Clerk	10	...	2	5	2	2
Clogger	...	...	...	...	1	...
Coach builder	1	...	...	1	...	1
Coachman	1	...	2	6	...	4
Coach smith	1	...	...	...	...	...
Coal merchant	1	...	1	...	1	...
Collector	1	...	...	...	...	...
Commissary	...	...	...	1	...	...
Confectioner	1	...	...	...	1	...
Cooper	...	...	...	...	1	1
Corn dealer	...	...	...	...	1	...
Cotton salesman	1	...	...	...	...	...
Customs officer	1	...	...	...	1	...
Dock gateman	...	...	1	...	...	...
Domestic servant	1	19	12	9	...	...
Draper	2	...	...	...	1	1
Dressmaker	...	3	1	...	...	...
Driller	...	...	1	3	...	...
Earthenware dealer	2	...	...	1	...	...
Engine cleaner	1	...	...	1	...	...
Engine driver	3	...	7	3	5	...
Engine fitter	2	...	16	11	3	1
Engine smith	...	...	...	1	...	...
Engine turner	1	...	1	...	...	...
Engineer	4	...	...	7	5	1
Farmer	1	...	...	1	1	3
Farrier	...	...	...	1	...	...
Ferry collector	1	...	...	1	...	...
Ferry proprietor	...	...	...	1	...	...
Fishmonger	1	...	1	...	...	...
Flat master	1	...	...	...	...	...
Flour dealer	...	...	1	...	...	...
Forgeman	1	...	...	...	...	...
French polisher	...	...	1	...	...	...

TABLE VI.—*Continued.*

Occupation, &c.	M	F	Son.	Daughter.	Wife.	Widow.
Furnaceman	...	...	2	1	...	...
Furniture remover	1	...	...	...	...	...
Gardener	4	...	6	4	6	1
Gas fitter	3	...	1	...	...	...
Gate keeper	...	...	...	...	...	1
Gentleman	7	...	...	2	4	3
Gilder	...	...	...	...	1	...
Glazier	...	...	...	...	1	...
Governess	...	1	1	...	...	...
Greengrocer	3	...	2	1	...	...
Grocer	1	...	4	5	4	...
Groom	3	...	1	...	...	...
Hairdresser	2	...	...	...	...	1
Hawker	2	...	...	...	...	...
Hay dealer	...	...	1	...	...	...
Herbalist	1	...	...	...	...	...
Horse keeper	2	...	2	1	...	...
Horse slaughterer	1	...	...	...	...	...
Hosier	...	...	1	...	...	...
Housekeeper	...	2	...	...	...	...
House proprietor	1	1	...	...	...	1
Ironmonger	...	...	1	...	...	...
Iron moulder	...	...	2	...	...	1
Iron planer	...	...	2	...	...	...
Iron turner	...	...	...	1	...	...
Iron worker	...	...	...	1	...	...
Jeweller	1	...	...	...	...	...
Joiner	11	...	10	14	11	4
Labourer	122	...	104	108	52	36
Landscape painter	1	...	...	...	...	...
Lard refiner	...	...	3	...	...	...
Lath cleaver	1	...	...	...	...	1
Leather dealer	...	...	...	1	...	...
Licensed victualler	3	...	3	3	2	2
Machinist	2	...	2	...	...	...
Manager	1	...	3	1	...	...
Manufacturer	1	...	2	...	...	...

TABLE VI.—*Continued.*

Occupation, &c.	M	F	Son.	Daughter.	Wife.	Widow.
Marine store dealer	...	...	1	...	...	1
Mariner	15	...	28	27	9	11
Medical practitioner	...	...	1	...	...	...
Merchant	4	...	3	6	2	5
Messenger	1	...	...	...	1	...
Milk dealer	1	...	...	...	2	...
Miller	1	...	1	1	...	...
Millwright	...	...	2	...	1	1
Musician	...	...	1	1	...	...
Naval officer	...	...	...	1	...	1
Notary	...	...	...	...	...	1
Nut and bolt maker	1	...	...	...	...	...
No occupation	1	1	1	...	...	...
Office boy	1	...	...	...	...	...
Packer	1	...	...	...	...	...
Painter	6	...	9	7	3	1
Pattern maker	...	...	1	...	...	...
Pawnbroker	1	...	...	1	1	...
Pensioner	4	...	1	...	1	1
Photographer	...	...	...	1	...	...
Pier master	1	...	...	...	1	...
Pilot	...	...	...	2	...	1
Planter	...	...	...	...	...	2
Plasterer	1	...	3	5	...	1
Platelayer	1	...	2	...	...	...
Plumber	1	...	2	...	...	1
Policeman	3	...	1	2	1	...
Porter	7	...	4	2	3	1
Poulterer	...	...	1	...	...	...
Printer	1	...	1	2	2	...
Prison governor	...	...	...	...	...	1
Provision dealer	2	...	1	1	2	...
Publican	2	...	4	3	3	1
Quarryman	3	...	...	4	...	...
Railway servant	3	...	8	3	4	...
Refreshment house keeper	2	...	...	...	1	...
Retired police officer	2	...	...	...	...	1

TABLE VI.—*Continued.*

Occupation, &c.	M	F	Son.	Daughter.	Wife.	Widow.
Retired tradesman	3	...	...	...	...	...
Saddler	...	...	...	...	1	1
Sailmaker	...	...	1	2	...	...
Sawmaker	...	...	...	1	...	...
Sawyer	2	...	4	2	3	...
Schoolmaster	2	...	1	1	...	...
Ship fitter	1	...	...	...	...	...
Ship keeper	3	...	...	...	...	1
Ship owner	1	...	1	1	1	...
Ship purser	...	...	...	1	...	...
Ship rigger	1	...	1	3	...	1
Ship smith	1	...	1	...	1	1
Ship steward	1	...	2	1	..	...
Shipwright	5	...	10	6	9	1
Shoemaker	6	...	4	5	1	4
Shopman	...	...	...	1	...	...
Soldier	...	...	...	1	...	...
Solicitor	...	...	1	...	...	2
Stageman	1	...	1	...	...	...
Stationer	...	...	...	1	...	1
Stevedore	1	...	3	1	...	...
Stonemason	5	...	2	5	2	5
Stoker	3	...	10	9	8	...
Storekeeper	...	...	1	1	1	1
Striker	...	...	1	1	...	...
Surveyor	...	...	...	...	...	1
Tailor	8	...	2	7	5	2
Tallow chandler	...	...	...	...	1	...
Tanner	1	...	...	...	...	1
Team owner	...	...	1	...	...	...
Timekeeper	2	...	...	1	1	...
Tinsmith	1	...	...	3	...	3
Tobacconist	1	...	...	...	...	...
Traveller	1	...	3	3	...	1
Treasurer	...	...	...	...	1	...
Trimmer	...	...	1	...	...	...
Unknown	5	9	...	...	...	...

TABLE VI.—*Continued.*

Occupation, &c.	M	F	Son.	Daughter.	Wife.	Widow.
Venetian blind maker	2	...	...	...	...	...
Waiter	...	...	...	...	...	1
Watch jobber	...	...	1	...	...	...
Watchmaker	1	...	1	...	1	...
Watchman	1	...	...	3	...	...
Waterman	1	...	10	2	3	...
Weaver	...	...	...	1	...	1
Weight taker	1	...	...	...	...	...
Well sinker	...	...	...	...	...	1
Wheelwright	...	...	...	3	...	1
Whitesmith	...	...	3	1	...	...
Wine merchant	1	...	...	2	...	1
	409	44	418	425	212	148

RIVER MERSEY
8. MERSEY
9. BEBINGTON
WOODSIDE FERRY.
MONKS FERRY
BIRKENHEAD FERRY
TRANMERE FERRY.
ROCK FERRY.
WALLASEY DOCK
MORPETH DOCK
BIRKENHEAD & CHESTER RAILWAY
GAS WORKS
CLIFTON PARK
BIRKENHEAD PARK
OXTON VILLAGE
FLAYBRICK HILL CEMETERY
No. 1
No. 2
No. 3
No. 5
No. 6
No. 7
No. 8